



Given, J. (2008). The eclipse of the universal service obligation: taking broadband to Australians.

Originally published in *info: The Journal of Policy, Regulation and Strategy for Telecommunications, Information and Media*, 10 (5-6): 92-106.

Available from: <http://dx.doi.org/10.1108/14636690810904742>

Copyright © 2008 Emerald Group Publishing Limited.

This is the author's version of the work. It is posted here with the permission of the publisher for your personal use. No further distribution is permitted. If your library has a subscription to this journal, you may also be able to access the published version via the library catalogue.



**This is a pre-print of an article whose final and definitive form  
has been published in**

*info: The Journal of Policy, Regulation and Strategy for Telecommunications,  
Information and Media*

<http://info.emeraldinsight.com/products/journals/journals.htm?PHPSESSID=g30d1k2n2d67fgsppvdhmu0ho0&id=info>

Jock Given, 'The Eclipse of the Universal Service Obligation: taking broadband to  
Australians', *info: The Journal of Policy, Regulation and Strategy for  
Telecommunications, Information and Media*, vol 10 no 5-6 (2008), pp. 92-106

\*\*\*

## **The Eclipse of the Universal Service Obligation**

### ***Abstract***

It is now several years since the Australian Government decided the universal service obligation was 'not an effective mechanism to provide broad consumer access to an increased range of services into the future'. This is not because the principle of universal service has stopped being a sensitive political issue. On the contrary, in its application to broadband, it has moved to the centre of debate and policy action about the country's economic future. Responding to the perception of Australia as a 'broadband backwater', the Labor Government elected in November 2007 is committing \$A4.7 billion (€2.8 billion) to an investment in some form of public private partnership to build and operate an open access fibre-to-the-node (FTTN) or fibre-to-the-premises (FTTP) network reaching 98% of Australians within five years. The annual opportunity cost of these funds is about twice the size of the universal service levy in 2007/08. The proposed national broadband network continues the trend towards using government funding to achieve telecommunications policy goals, initiated by the previous government with some of the proceeds of privatization. It also supplements it with a reversion to a degree of state ownership in a facility likely to have strong natural monopoly characteristics. The USO survives as a policy mechanism, but is contained to fixed line telephony, payphones and basic digital data capability, and its declared costs have fallen. At least for the time being, it has been eclipsed as a policy tool for making basic telecoms services universally available.

## The Eclipse of the Universal Service Obligation

The day this article was due, Australia's Minister for Broadband, Communications and the Digital Economy invited bids for a new national broadband network (Conroy). Up to \$A4.7 billion (€2.8 billion) of federal government money will be invested in some form of public private partnership to build and operate an open access fibre-to-the-node (FTTN) or fibre-to-the-premises (FTTP) network. Download speeds of at least 12 Mbps will be made available to 98% of Australian homes and businesses within five years. 'Uniform and affordable retail prices' are to be charged to consumers wherever they live. The Government expects to earn a return on its equity in the project. It is taking place outside the formal mechanism of 'universal service', though it is all about delivering near-universal access to a level of communications service that the Government believes is essential for effective participation in society and the economy.

This plan was first announced in March 2007 by the Labor Opposition that won office later in the year. It represents a dramatic shift away from the headline trends of telecommunications policy over the last two decades, but an extension of another, less-remarked-upon trend. Since the late 1980s, governments in Australia and elsewhere have overturned their historic reliance on state-owned telecommunications monopolies as instruments of universal, affordable basic services. The previous Labor Government merged the state-owned domestic and international carriers to form Telstra in the early 1990s and removed its service and infrastructure monopoly. The construction of a competing fixed line network and two competing GSM mobile networks were allowed, and an access regime was established to give new entrants fair and non-discriminatory access to critical facilities.

The conservative Liberal National Coalition that held office from 1996-2007 implemented the open competition foreshadowed by Labor and privatised the incumbent in three stages in 1997, 1999 and 2006. Now, just as the historic process of getting the state out of telecommunications ownership is virtually complete, the proposed national, fibre-based broadband network will put it back in as a major equity stakeholder. The policy implies that such a network is a natural monopoly, a species whose looming extinction underpinned the whole trend towards liberalization and privatization. The less-remarked-upon policy trend, which the national broadband plan expands, is the spending of large amounts of public money on telecommunications infrastructure and services. So the old mechanism of public ownership is staging a partial return; the public cash that flowed throughout the privatization process is about to swell even more strongly; and the maturing mechanism of access regulation will be strengthened as the price of public investment.

Part of the about-face on state ownership can be explained simply by the change of government. Telstra privatization was one of the few policy differences between the major parties in the 1996 election. Labor and most of the public continued to oppose it, and even the army of shareholders who acquired a stake in the business could not be

counted on to support it once the share price dived during the Tech Wreck. The public private partnership to build and operate a National Broadband Network, however, is not a simple reversion towards traditional Labor policy. The party moved well way from the socialist objective it adopted in the early 1920s (Turner: 223-4), privatizing other state-owned corporations when in office in the 1990s, including the Commonwealth Bank, Qantas and Australian Airlines and the domestic-satellite system AUSSAT. There were many other factors at work. Some were typical of those at play around the world, but they came together at a unique moment of technical, political and budgetary opportunity.

## ***Turning around***

### **The growing importance of communications**

Communications has always been politically important in Australia. New connections to the world have opened amid much fanfare about the annihilation of distance—the Overland Telegraph Line, direct wireless telegraph and telephone services, the COMPAC telephone cable across the Pacific, satellite and later submarine fibre links. The availability, quality and price of services has been a perennial target for local politicians, from the mails and the telegraph, through the telephone, radio and television broadcasting, to mobile telephony, internet access and now high-speed broadband. The ‘information age’ of the late 20<sup>th</sup> century, however, shifted communications and information to the centre of economic policy. Telecommunications revenue more than doubled as a percentage of GDP between 1985 and 2001 (OECD 2007: 83). Even as the prices for traditional products like voice telephony plummeted (ACCC 2004), consumers spent a bigger share of their income on communications (Roberts: 18-9; OECD: 32). Innovation across the whole economy was argued to come increasingly from decentralized users rather than centralised institutions. High quality of communications links, especially high speed broadband, were critical if they were to perform this role (Bar and Riis). Announcing the National Broadband Network Plan, the Opposition leader declared advanced communications networks were the most crucial infrastructure for the global economy of the 21<sup>st</sup> century (ALP).

Compositional shifts in this growing industry had implications for the universal service obligation (USO). Services traditionally comprising the USO, fixed line voice telephony and payphones, have declined while mobile telephony and broadband grew. The incumbent Telstra earned 53% of its sales revenue from basic access charges and local, national long distance and international calls in 1996/97, but just 22% a decade later. The drop for calls alone was even sharper, from 42% to 14%, because prices for basic access increased steeply. Payphone numbers fell from 84,000 in 1995 to 58,000 in 2006 and increasing use of free-to-caller services like calling cards mean much payphone use earns the operator little or no revenue. Telstra’s payphone revenue fell by 11.5% in 2006/07 alone. Mobile and internet revenue, however, have been growing rapidly, up 14% and 35% respectively in 2006/07. Although in 2006/07 Telstra still earned as much from fixed telephony as it did from mobile, internet and IP and data access combined (around

39% of sales revenue), the trend away from fixed telephony is plain. For the many operators who do not offer fixed telephony products at all, it is even clearer (ACCC 2007; ACMA; DCITA 2007: 14-7; Telstra 2007, 1997, 1995).

Australia celebrated the rapid uptake of mobile phones and dial-up internet in the 1990s as further chapters in its history of enthusiasm for new technology—a history asserted more easily than it is quantified. These new products were not left completely to the liberalising market. Federal government funds assisted with problems about coverage and cost, and there was much political heat at moments of technical migration. The Government was very involved in the shutdown of the pioneer analogue AMPS mobile network, and a similar situation has recently occurred when Telstra shut down its CDMA network, leaving customers to rely on its 'NextG' 3G network. Government money helped to improve mobile coverage along highways and in smaller towns and to install equipment enabling non-metropolitan customers to take advantage of Australia's untimed local calls for dial-up internet access. But overall, the growth of mobile telephony and dial-up internet were seen to demonstrate the benefits of the competition that began in the early 1990s and broadened into an open market in 1997. Studies in 2000 and 2005 both showed the level of basic internet access to be the third-highest in the world (Curtin; OECD 2007: 132).

### **'Broadband backwater'**

Broadband was a different story. The country's status as a 'broadband backwater' has acquired as much currency as its older reputation as an early adopter of everything. In June 2002, there were just 1.3 broadband subscribers per 100 inhabitants, about a third of the OECD average and well behind market leaders Korea (20.3) and Canada (10.3). Two years later, the figure had increased to 5.2. This was closer to the OECD average (8.5) but left Australia in 20<sup>th</sup> place on the OECD league table increasingly treated as the yardstick of national broadband performance (OECD Broadband Statistics). In December 2005, Australia crept ahead of the OECD average (13.6 to 13.4), but it was too little too late. James Packer, then controlling one of the biggest media companies, PBL Media, said broadband performance was 'embarrassing' (McIntyre). Rupert Murdoch, who controls most metropolitan daily newspaper circulation and 25% of the dominant pay TV operator Foxtel, declared the situation a 'disgrace'. 'Real broadband, not the type they're talking about here - where you get, say, 20Mbps of data into your home,' he said, 'changes everything' (Day and Sproull). Fairfax's David Kirk, in charge of the daily broadsheets in Sydney and Melbourne and the national financial daily, talked about 'fraudband' (Fairfax). Consultant Mark Pesce said Australia was 'basically an internet backwater ... Broadband is merely the latest chapter in a very old story'.

Pesce was one of many who laid the blame firmly with the now part-privatised incumbent, Telstra, and the government that allowed it to retain so much market power. Criticism centred on the continuing strength of its position in the market for international capacity and dominance of the local loop, though it no longer controlled it totally once the second carrier Optus built a hybrid fibre coaxial (HFC) network passing over 2

million homes. The former monopolist was thought to be gaming regulatory processes, preventing or delaying third party access to bottleneck facilities and hence the arrival and strength of competition. The competition regulator thought it should be forced to divest its HFC network in the major cities and 50% stake in the main pay TV operator Foxtel that used it (ACCC 2003: 57).

These and other factors, it was argued, allowed Telstra to leverage its power in existing markets to control the timing and price of new products. Broadband was the prime example and the one that mattered most to the society and economy. Telstra was slow to launch the product, the argument went; it offered sub-standard products at high prices when it finally did; and it resisted regulatory intervention allowing rivals to install the equipment in its exchanges that would enable them to offer xDSL services at competitive prices. These complaints went to the heart of the whole telecommunications policy mix. They were familiar to analysts of telecommunications competition policy around the world, but were bolstered by Australia's particular timing of liberalization and privatization.

The first tranche of Telstra shares was offered to the public in late-1997, just as the era of open competition was beginning. The second was sold two years later (O'Leary). The former monopolist was being let off the leash of public control before the competition could get on its feet and while the competition regulator was still developing expertise in telecommunications access and the sophisticated and subtle ways that anti-competitive conduct could occur. The new entrants arrived, but Telstra continued to earn almost all the industry's profits (Buddecomm). Telstra demanded that they compete, as they had promised, instead of running to the regulator. They insisted real competition was impossible while the incumbent retained so much power.

So long as the issue was access to Telstra's existing copper local loop for services like local calls and dial-up or xDSL internet access, the conflict, though bitter, was largely contained within the access regime set out in the 1997 legislation as implemented by the regulator, modified by the Parliament and supplemented by the government spending programs discussed below. It was more complex over the HFC networks that Telstra and Optus each built in the mid-1990s to deliver pay TV and internet access to households in the big cities. On three separate occasions, exemptions from standard access obligations were sought and granted: initially, to support the initial construction, and most recently to support the digitization of the networks (Kelso 2008a; 2008b: 49-90). Once the focus shifted to the even bigger idea of next generation networks taking fibre much deeper into the customer access network, the game changed more fundamentally. The publicly audible debate about telecommunications competition shifted decisively from lower prices for familiar products to investment enabling continuous innovation in new products.

## **A new network and a new plan**

Telstra proposed to build an FTTN network but wanted some government funding and regulatory forbearance (Telstra 2005). The regulator accepted the need for a degree of regulatory certainty on which to base the large investment, but insisted that the question of access to the network would have to be determined through its normal, public regulatory processes. A stalemate ensued. Telstra broke off discussions with the regulator a year after announcing its plan (Campbell and Holmes). A few months later, a third tranche of Telstra shares was sold to the public, leaving a public stake of around 17% which the Government decided to transfer to its newly established Future Fund. This fund was officially created to assist future Australian governments meet the future cost of the unfunded public sector superannuation liabilities (Future Fund). It would be built up mainly from the annual budget surpluses that were piling up now that government debt had been eliminated. In reality, the Future Fund was a device to help the Treasury resist demands for new spending in an environment of persistent surpluses. The concept caught on, and further specific purpose funds were created for education and, as discussed below, communications.

Soon after the November 2006 ‘T3’ sale, the Labor Opposition elected a new leader, Kevin Rudd. He was about twenty years younger than the incumbent Prime Minister, John Howard, who had been in the job for over a decade and in politics for more than three. ‘New leadership’ became Rudd’s slogan and ‘the future’ a message embedded in every statement. Inheriting a widespread perception of a crisis in the most important infrastructure of the 21<sup>st</sup> century, a global technology consensus on the need to extend fibre deeper into customer access networks, a political need for visionary plans, and budget surpluses as far as the fiscal eye could see, Rudd announced the plan for a national broadband network three months after becoming leader. A public private partnership was a convenient way for Labor to acknowledge the reality of Telstra’s now overwhelmingly private ownership, while incorporating a measure of state-ownership in a strategically critical part of its network. This kept faith with the position maintained in opposition and still supported by a majority of voters. A 2003 poll found 57% of Australians preferred Telstra to be fully publicly owned and 31% preferred a mix of public and private ownership. Less than 10% wanted full privatisation (Pusey and Turnbull: 165-6).

The \$4.7 billion to invest in the partnership would come from public investments already held or committed to communications—the Telstra stake now parked in the Future Fund pending further sell-down and estimated to be worth \$2.7 billion, and the \$2 billion capital promised to the Communications Fund, discussed below. This effectively took what was left of Labor’s old policy and invested it in a new one. When the then Government criticised the Opposition for ‘stealing from the future’ (Gittins), Labor responded that a superfast broadband network was precisely the kind of investment a modern nation should be making for its future. The nearly-twelve-year-old Government was painted as prisoner of the old task that had dominated its communications policy agenda since 1996—selling off Telstra—while the alternate government was coming up with new plans for tomorrow.

## ***Why not the USO?***

Labor could have adopted an older model for setting and funding a universally available basic level of telecommunications service—the USO. The Minister has powers under the *Telecommunications (Consumer Protection and Service Standards) Act* to upgrade the obligation by prescribing a carriage service that has to be made reasonably accessible to all Australians. That power has never been used. Or it could have amended the legislation to add an additional obligation to the USO. This was done in 2000 when a ‘digital data service obligation’ (DDSO) was introduced to supplement the USO (Given: 207-17; Grant: 249-52; McElhinney). A digital data service essentially means 64kbps ISDN. Because the USO and, where it can only be delivered by satellite, the DDSO, are paid for by an industry levy, both these options would have meant most companies in the industry had to contribute to the investment undertaken by others (probably Telstra) to deliver the upgraded broadband USO. That would have been deeply unpopular, especially with those interested in investing money of their own to provide commercial services in what had once been thought of as USO areas.

Alternately, a licence condition could have been imposed on Telstra or another carrier or carriers requiring it or them to make a higher level of service reasonably accessible to all Australians. This was done in 1997, when Telstra was required to make the 64kbps ISDN digital data capability available to 93.4% of the population by 1 July and 96% by the end of the following year. These percentages covered those living within 4km of a metropolitan ISDN-capable exchange or 6km of a country ISDN-capable exchange, who could therefore receive the digital data capability by terrestrial means. Using a licence condition meant Telstra had to meet the cost of offering digital data capability to most customers itself, although it had already indicated that it intended to roll out this capability commercially anyway. The licence condition was just a public safeguard of that commitment.

A departmental review of the USO in 2004 concluded it might be reasonable for the existing USO to be funded wholly by Telstra instead of the industry levy, but not if the obligation was expanded to include broadband (DCITA 2004: 158-61). Telstra still funds the bulk of the industry levy because it continues to earn the bulk of industry revenue on which it is based, as shown in Table A. The Government rejected complete Telstra funding and had already rejected expansion of the USO beyond fixed telephony, payphones and basic digital data access, although it supported its continuing role for standard telephony. Rejecting an expanded USO endorsed the Regional Telecommunications Inquiry’s recommendation that the USO was ‘not an effective mechanism to provide broad consumer access to an increased range of services into the future’ (DCITA 2004: Attachment A).

As the political imperative shifted beyond voice telephony and basic digital data capability to higher speed broadband, it was impossible merely to tweak the architecture of universal service and asymmetric obligations on the former monopolist. The cost was simply too large. Telstra could never agree to meeting it all, given the doubts about the business case for extending fibre deeper into the customer access network even in areas

where existing USO services could be profitably supplied. The whole industry would never agree to sharing the cost under the existing USO arrangements because it had never agreed about the size of the industry levy to fund even the current obligations. Telstra had long argued it was not adequately compensated for providing the uneconomic services. It disputed the finding of a 1989 study that the existing 'community service obligations' cost the incumbent \$240 million annually, claiming the true cost was \$800 million (Luck). The then Labor Government accepted the lower figure. It provided a crucial piece of evidence that influenced it to end the state telecommunications monopoly. The cross-subsidy needed to underwrite uneconomic universal services was not so large as to require the whole structure of the industry to be based around it. But it seemed too large to ask the Treasury to pay for out of general revenue. An industry levy seemed more palatable and durable, especially at a time when there was no industry to speak of other than the incumbent.

Once the industry-funded USO was put in place for the newly-competitive market in 1991, disagreement over the net universal service cost continued. The size of the annual subsidy was negotiated rather than agreed. When a new model commissioned by the regulator assessed the annual cost at \$548 million for 1997/98, Telstra's competitors were horrified but Telstra still argued it was less than a third of the real cost. The parliament passed legislation capping the subsidy for that year at \$253 million and since then, the annual figure has simply been determined by the Minister on advice from the communications regulator. It has fallen steadily and will be \$145 million in 2007/08 (DCITA 2007: Attachment D).

Contestability trials were designed to give Telstra's rivals an opportunity to take over the delivery of the USO in two large areas and substitute administratively-determined 'forward-looking' costs for Telstra's claimed costs in calculating the subsidy. But the trials failed. According to Luck, this was because, by definition, no-one including Telstra could match the minimum costs on which the proposed subsidy levels were based, and because Telstra had economies of scale that were not available to potential entrants in the contestable areas. There was also no clear agreement about what would happen to Telstra's facilities in these areas if it lost the contestability tenders. This would be a critical issue if the provider that did win failed to meet its obligations (Luck; DCITA 2007 and 2004). Telstra continued as the sole USO provider, although it and another company were both authorized to supply the satellite-delivered DDSO.

The result of the failure of the contestability trials and continuing Ministerial determination of the falling annual USO subsidy is that some of the heat has been taken out of the USO. It is an uneasy truce, however, not a sign of shared confidence that the model is robust or ready for a bigger job. The trials gave Telstra's rivals the opportunity to put up. The failure to attract new USO providers has forced those rivals to shut up, for the time being. The outgoing government published an Issues Paper for public comment before the 2007 election but did not make any decisions about changes to USO arrangements. The amount of the 2007/08 USO levy had already been determined, but a decision about 2008/09 will have to be made sometime, even if there are no changes to the scheme (DCITA 2007). Without shared confidence in the existing model, it was never

likely that it would be chosen as the policy mechanism to support a hugely expensive new network to deliver high-speed broadband. There were many calls for it to be used to drive the expansion of higher level services in advance of widespread commercial take-up, but they were never heeded. The Government found a different way of doing it.

## ***Bonanza***

Privatizing Telstra created a pool of money to spend fixing problems that those opposed to the sell-off thought it would cause or worsen. Chief among these was the quality and cost of services in non-metropolitan areas. Because the Conservative Government was a coalition of a country-based National Party and a city-based Liberal Party, this problem got at least as much attention as it might have from Labor. The policy dynamic it set up—reduced public ownership, but more public cash—was one of the central features of the period of Coalition Government. It was arguably as important a policy transformation as the overarching trends towards liberalization and privatization, because of the boundaries it placed around their consequences. Major spending programs were announced before each of the three legislative amendments that enabled the sale of the three tranches of Telstra shares. Further measures were announced in response to two reports about the state of telecommunications infrastructure and services in country areas. These reports were commissioned to carry out the Government's commitment not to proceed to full privatization until 'services in the bush were up to scratch'.

Major spending programs since 1996 are summarized in Table B below. Their cost is compared to the USO cost in Table A. The existence and evolution of spending programs reveals three important features. First, the amounts of money are very large. While a neat comparison is difficult because of shuffling between programs, a simple addition of the amounts spent on these major programs over the twelve years to 2007/08 gives an annual average of \$222 million, including a nearly \$1 billion commitment to a non-metropolitan fibre/ADSL2+/WiMAX network cancelled by the incoming Labor Government. Over the same period, the universal service fund averaged \$230 million. That figure has been falling, and over the three years to 2007/08, will average \$158 million (author calculations from DCITA 2007 Attachment D, DCITA 2004 Attachments B and F). This means that under the previous government, targeted funding programs became almost as important as the USO as mechanisms to deliver on the old goal of universal access to affordable basic communication services. While the cost of the USO beyond 2007/08 has not yet been determined, the opportunity cost of funds to be invested in the new government's National Broadband Network is estimated at around double the 2007/08 USO cost. Financially, the private-industry-funded USO has been eclipsed by public investment as a telecommunications policy tool.

Second, the focus of spending programs narrowed over time. They evolved from the expansive and ill-defined Networking the Nation (Simpson; ANAO 1999), through measures targeting more specific needs under the Social Bonus 2 and Telecommunications Services Inquiry Response initiatives, especially expanded mobile phone coverage and the extension of untimed local calls to remote areas (ANAO 2006,

2003), to an overwhelming focus on high speed broadband (ANAO 2007; Coonan 2007 and 2005). This evolution should not be over-stated. The Social Bonus 2 initiatives, expressly funded from the second tranche of Telstra sale proceeds, included large amounts for matters only peripherally or distantly relevant to telecommunications, such as extending broadcast service coverage and repairing environmental degradation. Their very particular political origins were plain in the preponderance of spending in the small island state of Tasmania, the home of an independent senator whose vote on the privatization legislation was critical. A commitment of \$600,000 for an athletics centre in the state capital Hobart was an especially quirky 'social bonus' from the sale of the national telecommunications company (Alston). Nevertheless, it is clear that by 2005, the range of issues targeted by a wide range of programs in the late 1990s and early 2000s had been largely overtaken by just one: broadband.

Third, the classes of recipients of subsidies have narrowed. Where almost anyone with a good idea was encouraged to apply for funds under Networking the Nation, the more recent and much bigger Broadband Connect Infrastructure Program was aimed at a small number of big projects. In the event, all the money available under it and more was committed to a single project, the OPEL fibre/ADSL2+/WiMAX regional network. Although that commitment was cancelled by the incoming government, this was because it planned to hand about five times as much to another single recipient to build and operate a national FTTN network in partnership with the government. Targeted funding programs initially seemed to suit the competitive environment better than the USO, since they were better able to direct support to multiple providers. The perceived urgency of broadband and the anticipated economics of FTTx networks, however, has tempted both the outgoing and incoming governments to move some way back towards single provider models. The single infrastructure providers they have anointed are supposed to be open access, not old style vertically-integrated, monopolists, but in Australia at least, there is still considerable scepticism about how open that access will be in practice.

The privatization-financed bonanza of targeted funding programs addressing a wide range of issues through subsidies paid to multiple recipients has been a genuinely new way of supporting universal access to affordable telecommunications services. But it can also be argued to have progressively converged with aspects of the old mechanism, the USO, which addresses narrower goals through a subsidy paid mainly to a single provider. A crucial difference is that funding programs have not depended so critically on the precision of assessments of likely costs and revenues.

**Major Federal Government Telecommunications Funding Programs, 1996-2007**

| <b>Program</b>  | <b>Announcement/establishment date; trigger event</b>  | <b>Amounts and purpose</b>   | <b>Notes</b>  |
|---|--|--|---|
| <b><i>Networking the Nation - Regional Telecoms Infrastructure Fund</i></b> | Telstra sale, first tranche [described as a 'Social Bonus']<br>Announced December 1996, launched as Networking the Nation July 1997                  | Initial commitment \$250 million<br>Further sums/programs from Telstra Social Bonus 2 managed through Networking the Nation  | Overarching aim to improve telecommunications infrastructure and services in regional, rural and remote areas.<br>Wide range of project types.  |
| <b><i>Telstra Social Bonus 2</i></b>  | Telstra sale, second tranche<br>Announced June 1999  | \$666 million<br>12 programs including \$158 million for Building IT Strengths (BITS), \$150 million to make untimed local calls available to remote customers, \$61 million for Rural Transactions Centres and \$45 million for local government to provide online access to services and public internet access points | More specific programs targeting specific needs, funding either particular groups (local government, regional and remote communities) or telecommunications solutions (extended mobile phone coverage, additional rural networks) |
| <b><i>Telecommunications Services Inquiry Response Programs</i></b>         | Response to recommendations of <i>Connecting Australia</i> , the Telecommunications Service Inquiry (Bestey Report), Sept 2000<br>Announced May 2001 | \$163 million<br>7 programs ranging from \$72 million for two programs to expand mobile phone coverage and \$52 million for a National Communications Fund to less than \$1 million to research the needs of remote Indigenous communities   | Further programs targeting needs identified in the Telecommunications Service Inquiry   |
| <b><i>National Broadband Strategy</i></b>                                   | Announced 3 March 2004   | <ul style="list-style-type: none"> <li>▪ <i>HiBIS</i> program described below</li> <li>▪ \$23.7 million Coordinated Communications Infrastructure Fund to build on broadband infrastructure developments in public sector areas such as health and education</li> </ul>  | Strategy co-ordinated with most State and Territory governments   |

|  |   |  |  |  |  |
|--|---|--|--|--|--|
|  |   |  | <ul style="list-style-type: none"> <li>▪ \$8.3 million demand aggregation broker program to consolidate broadband demand to attract additional infrastructure investment</li> </ul>  |  |  |
| <i>Higher Bandwidth Incentive Scheme [HiBIS]</i> | Response to recommendations of <i>Connecting Regional Australia</i> , the Regional Telecommunications Inquiry (Estens Report), Oct 2002<br>Established June 2003<br>To run for 4 years 2003/04 to 2006/07 | \$107.8 million initial commitment [including \$35 million re-allocated from a Telstra Social Bonus 2 program]<br>Further \$50 million allocated June 2005 and timeframe reduced to December 2005<br>Final spend \$154.6 million   | <ul style="list-style-type: none"> <li>▪ Broadband support program: provided registered ISPs with per-customer incentive payments for supplying broadband services in regional, rural and remote areas at metro-comparable prices. Minimum requirements peak download/upload speed 256/64 kbps and usage allowance 500 Mbps per month</li> </ul>   |  |  |
| <i>Backing Australia's Ability 2</i>             | Announced June 2004   | Wider program providing \$54.1 million extra funding for two components of BITS program  |  |  |  |
| <i>Connect Australia</i>                         | Telstra sale, third tranche<br>Announced August 2005  | Total spending of \$1.1 billion <ul style="list-style-type: none"> <li>▪ \$878 million <i>Broadband Connect</i> programs described below</li> <li>▪ \$113 million health education and other innovative broadband networks</li> <li>▪ \$30 million remote area terrestrial and satellite mobile telephony</li> <li>▪ \$90 million remote Indigenous community telecoms and broadcasting</li> </ul> | Other elements <ul style="list-style-type: none"> <li>▪ \$2 billion in capital for a Communications Fund to be invested to deliver a future income stream estimated at \$400 million every three years [\$133 million per year] to fund new technologies in regional areas</li> <li>▪ strengthening telecommunications competition regulation by requiring operational separation at Telstra</li> <li>▪ tighter consumer safeguards</li> </ul> |  |  |
| <i>Broadband Connect</i>                         | Announced August 2005 as part of Connect Australia package, effectively extending HiBIS incentives to 2008/09<br>Stage 1 - 1 January to 30 June 2006<br>1 July 2006 to 30 March 2007                      | Total initial commitment \$878 million eventually spread across Stages 1 and 2 and Broadband Connect Infrastructure Program Stage 1 \$124.8 million<br>Initial commitment \$100 million  | Similar operation to HiBIS   |  |  |
| <i>Broadband Connect</i>                         |   |  |  |  |  |

|   |  |  |  |
|---|--|--|--|
| <i>Stage 2<br/>Broadband Connect<br/>Infrastructure Program</i> | 1 July 2007 to 30 June 2009  | Final spend \$133 million<br>\$600 million<br>Full sum + additional \$358 million committed to OPEL wholesale network using a mix of fibre, ADSL2+ and WIMAX to deliver 12 Mbps download speeds in rural and regional areas  | Initial program goal: support a small number of major projects of significant scale and service coverage selected on competitive basis, to encourage further take-up of affordable broadband services in under-served areas of regional Australia  |
| <i>Australia Connected</i>                                      | Response to Labor Opposition plan for FTTN public private partnership Announced 18 June 2007 | <ul style="list-style-type: none"> <li>▪ OPEL regional network announced taking full sum from Broadband Connect Infrastructure Program + additional \$358 million [terminated by Labor Govt]</li> <li>▪ <i>Australian Broadband Guarantee</i> described below</li> </ul> | <p>Other elements</p> <ul style="list-style-type: none"> <li>▪ Reconfirm \$2 billion in capital for Communications Fund [terminated by Labor Govt]</li> <li>▪ Competitive tendering for metropolitan fibre network [replaced and extended to national network by Labor FTTN PPP]</li> <li>▪ BroadbandNow: one-stop consumer help centre</li> </ul> |
| <i>Australian Broadband Guarantee</i>                           | Announced 18 June 2007 as part of Australia Connected<br>To run 1 April 2007 to 30 June 2008 | \$162.5 million<br>From 1 July 2008, the previous Govt intended that earnings from the \$2 billion Communications Fund would be available to continue this program if required   | Operates like HiBIS and Broadband Connect Stages 1 and 2, to provide a smooth transition from Broadband Connect Stage 2 to the Broadband Connect Infrastructure Program [retained by Labor Govt to 30 June 2008]   |

Source: Australian National Audit Office 2007, 2006, 2003, 1999; Coonan 2007 and 2005

## ***Eclipsing universal service?***

Is this the burial of universal service or its rebirth? In 1994, Browning set out the classical case for universal service to be put down. It was ‘a 1930s solution to a 21<sup>st</sup> century problem’, though he thought it should be buried ‘slowly, gently, and with great care to preserve both its spirit and its many achievements’. It was difficult to administer, but more importantly, it was fundamentally incompatible with the competition that was being introduced into telecoms markets around the world. Browning did not want the state to disappear from telecommunications, however, but to redirect its energies towards mandating open access to networks and providing subsidies directly to the genuinely disadvantaged.

Others agreed that traditional universal service was an anachronism, but for a different reason. They felt it needed to be refreshed for the Information Age. Citing references from 1986-95, Sawhney argued in 2003 there was a ‘wide-ranging consensus ... within the telecommunications policy community that universal service should be expanded beyond basic voice telephony’. He acknowledged dissenters like Browning and Compaine and Weinraub, and might have added Xavier, writing in the same year (2003). More recently, Davies in the United States and Gittins in Australia are among those suggesting the private benefits of higher level services are still more apparent than the public ones. Gittins, the *Sydney Morning Herald’s* economic writer, complained that the proposed tax-payer-supported national broadband network is ‘a cynical bribe to the powerful media proprietors and to country voters, and a come-on to punters who want to download their porn faster, disguised as a far-sighted, imaginative initiative to make us internationally competitive in the productivity-oozing new world of e-everything’.

Compaine and Weinraub noted how rare it had been for the United States to elevate a particular service to a universal requirement. The authors of the Constitution had nominated the postal service and legislators in the depths of the Depression annointed voice telephony. Information services like encyclopaedias, newspapers and broadcasting, however, had never achieved this status, at least in the United States. In 1997, these authors were not convinced that the internet had yet acquired the necessary status. In general, it has been their caution about expanding the services encompassed by the USO rather than Sawhney’s claimed consensus, that has been reflected in actions by government around the world (Xavier 2006a and 2006b; Xavier and Ypsilanti), including Australia’s (cf. Barr’s recent proposal for a broadband USO). Xavier and Ypsilanti argued in 2007 ‘broadband penetration rates are at present well under the penetration level where a household’s inability to access broadband services at a “reasonable rate” could be considered a form of social exclusion’, although they suggest ‘the situation may well change in an NGN [next generation network] world, especially if governments use broadband to deliver certain education, health and other public services’.

As Young explains, universal service has been a malleable concept across time and space (see also Standard Telephone Service Review Group: 31-4). Mueller says it meant something entirely different to Theodore Vail and the architects of the 1996

Telecommunications Act. Australia did not have a universal service obligation until shortly before Browning argued it was an idea whose time had passed, nearly 60 years after the 1934 Communications Act. The debate about expanding the USO beyond voice telephony in the 1990s was not an argument about where an old concept should go in the future, but what a very young concept really meant. Those who argued, like Browning, that it was a tool of the era of voice telephony and monopoly, have so far been proved about half-right. It has not been expanded to encompass mobile telephony or broadband. But it has not disappeared, and was even effectively expanded, though only to include basic digital data capability and then only in a very carefully crafted way that added little to the cost.

More significantly, although the specific mechanism has been contained and the declared costs have fallen, the policy goal that sustained the USO has spawned a whole new suite of government funding programs to support universal access to mobile telephony, internet access and now broadband. Those programs have cost the government almost as much as universal service has cost the industry over the past decade and are about to cost a lot more. As Young also explains, universal service is ultimately a political concept. The politics, technology and economics of broadband put the idea of universal service and the mechanism of an industry-funded USO to the test. The idea held up but the mechanism broke.

## ***Conclusion***

Elected governments never stop being interested in the quality and price of communications services available to their citizens. So the idea of ‘universal service’ survives even as the formal policy mechanism has been complemented or overtaken. In Australia, at least for the time being, the USO has been eclipsed, but the aspiration that motivated it—‘basic telecoms services for all at an affordable price’ (Hart)—has once again merged with the broader question of telecommunications competition and policy generally. Nearly twenty years ago, the research finding that the cost of delivering what came to be called the USO was much *smaller* than previously thought was a decisive factor in the telecommunications policy sea-change that followed. The finding convinced politicians that they could have the dynamism and downward price pressure of competition without losing the universality previously promised by a publicly-controlled, cross-subsiding monopolist.

Two decades on, they are not so completely convinced. Competition was supposed to shrink the universal service problem by lowering costs and reducing the number of uneconomic customers. With more players, it would be more likely that at least one of them would choose to invest in infrastructure serving customers everywhere. Instead, the question of the adequacy of investment in telecommunications infrastructure, which used to be thought of as confined to hard-to-serve customers in remote locations, has spread across the whole network. The argument that *no-one* is getting fast enough and cheap enough broadband has struck political pay-dirt. Because the political process has judged that services beyond voice telephony, payphones and basic digital data capability are now

essential for effective participation in society and the economy, the universal service problem is so much *bigger* than can be adequately accommodated by the USO mechanism.

This has driven two policy sea-changes. First, it persuaded a Conservative Government to direct large sums from the proceeds of Telstra privatization towards improving communications infrastructure and services in non-metropolitan areas. Then it persuaded a Labor Party that never accepted the wisdom of privatizing Telstra, and was determined to overturn the perception of Australia as a broadband backwater, to combine elements of the old and the new in telecommunications policy. Grasping a technical, political and budgetary opportunity, it has brought together the new tools of funding programs and (it promises) open access regulation with its old attachment to public ownership and the principle of natural monopoly in the fixed customer access network. It is a new solution, but there is much that is familiar about it.

## References

- Alston, Senator the Hon R. (1999), 'Accessing the Future: The Telstra Social Bonus', Media Release 80/99, 20 June.
- Australian Bureau of Statistics [ABS] (2007), *Patterns of Internet Access in Australia*, ABS Cat. No. 8146.0.55.001, ABS, Canberra, November.
- Australian Labor Party [ALP] (2007), *New Directions for Communications: A Broadband Future for Australia – Building a National Broadband Network*, ALP, Canberra, March.
- Australian Communications and Media Authority [ACMA] (2007), *Communications Infrastructure and Services Availability in Australia 2006/07*, ACMA, Melbourne.
- Australian Competition and Consumer Commission [ACCC] (2007), *Telecommunications Reports 2005/06*, ACCC, Canberra .
- ACCC (2004), *Telecommunications Reports 2002/03*, ACCC, Canberra .
- ACCC (2003), *Emerging Market Structures in the Communications Industry: a report to Senator Alston, Minister for Communications, Information Technology and the Arts*, ACCC, Canberra, June.
- Australian National Audit Office [ANAO] (2007), *Management of the Higher Bandwidth Incentive Scheme and Broadband Connect Stage 1*, ANAO, Canberra, 16 May.
- ANAO (2006), *Management of Selected Telstra Social Bonus 2 and Telecommunications Service Inquiry Response Programs*, ANAO, Canberra, 29 June.
- ANAO (2003), *The Administration of Telecommunications Grants*, ANAO, Canberra, 5 November.
- ANAO (1999), *Networking the Nation – The Regional Telecommunications Infrastructure Fund*, ANAO, Canberra, 1999.
- Bar, F. and Riis, A. (2000), 'Tapping User-Driven Innovation: A New Rationale for Universal Service', *The Information Society*, vol 16, pp. 99-108.
- Barr, T. (2007), 'Broadband: Towards a Universal Service', *Telecommunications Journal of Australia*, Vol. 57 No. 2/3, pp. 31.1-31.5.
- Browning, J. (1994), 'Universal Service (An Idea Whose Time is Past)', *Wired* 2.09: <[http://www.wired.com/wired/archive/2.09/universal.access\\_pr.html](http://www.wired.com/wired/archive/2.09/universal.access_pr.html)> (23 April 2004).

- Buddecom (2008), 'Australia: Analysis of the Government's National Broadband Network Request for Proposals', Paul Budde Communication, Bucketty, April.
- Campbell, L. and Holmes, J. (2008 forthcoming), 'Regulating Service Providers' Access to an FTTN Network', *Media International Australia*, No. 127 (May).
- Compaine, B. and Weinraub, M. (1997), 'Universal access to online services: an examination of the issue', *Telecommunications Policy*, Vol. 21, pp. 15-33.
- Conroy, Senator the Hon S. (Minister for Broadband, Communications and the Digital Economy) (2008), 'Government invites National Broadband Network proposals', Media Release, 11 April.
- Coonan, Senator the Hon H. (2007), 'Australia Connected: Fast affordable broadband for all Australians', Media Release 80/07, 18 June.
- (2005), 'Connect Australia: A Plan to Future Proof Telecommunications', Media Release, 17 August 2005.
- Curtin, J. (2001), 'A Digital Divide in Rural and Regional Australia?', Parliamentary Library Current Issues Brief 1 2001/02, Parliamentary Library, Canberra, 7 August: <<http://www.aph.gov.au/LIBRARY/Pubs/CIB/2001-02/02cib01.htm>> (22 April 2008)
- Davies, P. (2007), 'Broadband: Not quite universal', *fedgazette*, May, p. 7.
- Day, M. and Sproull, R. (2006) 'Murdoch Slams Slow Broadband', *The Australian*, 16 November: <<http://www.theaustralian.news.com.au/story/0,20867,20764474-7582,00.html>> (17 April 2008)
- Department of Communications, Information Technology and the Arts (DCITA) (2007), *Telecommunications Universal Service Obligation (USO) Review Issues Paper*, DCITA, Canberra.
- DCITA (2004), *Review of the Operation of the Universal Service Obligation and Customer Service Guarantee*, DCITA, Canberra, 7 April.
- Future Fund: <<http://www.futurefund.gov.au>> (24 April 2007)
- Gittins, R. (2007), 'Costello's conjuring tricks versus Rudd's bad broadband policy', *Sydney Morning Herald*, 26 March, p. 25.
- Given, J. (2001), 'Consumer issues', in Grant, A. and Given, J. (eds), *Australian Telecommunications Regulation: The Communications Law Centre Guide*, 2nd edn, UNSW Press, Sydney.

- Grant, A. (ed) (2004), *Australian Telecommunications Regulation: The Communications Law Centre Guide*, 3<sup>rd</sup> edn, UNSW Press, Sydney.
- Hart, T. (1998), 'A dynamic universal service for a heterogenous European Union', *Telecommunications Policy*, Vol. 22 No. 10, pp. 839-52.
- Kelso, R. (2008a forthcoming), 'Regulating Next Generation Broadband: Lessons from Australia', *Telecommunications Journal of Australia*, Vol. 58. No. 1 (Autumn).
- Kelso, R. (2008b), *Open Access to Next Generation Broadband*, PhD thesis, Creative Industries Faculty, Queensland University of Technology.
- Lloyd, R. and Bill, A. (2004), *Australia online: How Australians are Using Computers and the Internet 2001*, Australian Census Analytic Program, Australian Bureau of Statistics (ABS) Cat. No. 2056.0, Canberra.
- Luck, D. (2007), 'Future funding of the telecommunications universal service obligations in Australia', *Telecommunications Journal of Australia*, Vol. 57 No. 2/3, pp. 32.1-32.26.
- McElhinney, S. (2001), 'Telecommunications liberalisation and the quest for universal service in Australia', *Telecommunications Policy*, Vol. 25, pp. 233-48.
- McIntyre, P. (2006), 'PBL Boss Calls for Net to be Fixed', *Sydney Morning Herald*, 23 May: <<http://www.smh.com.au/news/wireless--broadband/pbl-boss-calls-for-net-to-be-fixed/2006/05/22/1148150189885.html>> (17 April 2008)
- Milne, C. (1998), 'Stages of universal service policy', *Telecommunications Policy*, Vol 22. No. 9, pp. 775-80.
- OECD Broadband Statistics: <<http://www.oecd.org/sti/ict/broadband>> (17 April 2008) (Table 1g. OECD historical broadband penetration rates)
- OECD (2007), *OECD Communications Outlook 2007*, OECD, Paris.
- O'Leary, G. (2003) (Economics, Commerce and Industrial Relations Group, Parliamentary Library), 'Telstra Sale', last update 15 Sept: <<http://www.aph.gov.au/library/pubs/online/TelstraSale.htm>> (15 April 2008)
- Pesce, M. (2007), 'Why we all hate Telstra', *The Age Business Day*, 20 May 2007: <<http://www.theage.com.au/news/business/why-we-all-hate-telstra/2007/05/19/1179497337693.html?page=fullpage>> (3 April 2008)
- Pusey, M. and Turnbull, N. (2005), 'Have Australians embraced economic reform', in Gibson, R. et al (eds) (2005), *Australian Social Attitudes: The First Report*, UNSW Press, Sydney.

- Roberts, S. (2008), *Measuring the Impacts of ICT Using Official Statistics*, DSTI/ICCP/IIS(2007)1/FINAL, OECD, Paris, 4 January.
- Sawhney, H. (2003), 'Universal Service Expansion: Two Perspectives', *The Information Society*, Vol. 19, pp. 327-32.
- Simpson, L., Daws, L. and Pini, B. (2004), 'Public internet access revisited', *Telecommunications Policy*, Vol. 28, Nos. 3-4, April-May, pp. 323-337.
- Standard Telephone Service Review Group (1996), *Review of the Standard Telephone Service*, Department of Communications and the Arts, Canberra, December.
- Sydney Morning Herald (2007) 'Fairfax Boss Denounces "Fraudband"', *Sydney Morning Herald*, 8 March: <<http://www.smh.com.au/news/technology/fairfax-boss-denounces-fraudband/2007/03/07/1173166799046.html>> (17 April 2008)
- Telstra, (2007, 1997, 1995), *Annual Reports*, Telstra, Melbourne: <[http://www.telstra.com.au/abouttelstra/investor/annual\\_reports.cfm](http://www.telstra.com.au/abouttelstra/investor/annual_reports.cfm)> (24 April 2008)
- Telstra (2005b), 'The Digital Compact and National Broadband Plan', Canberra, 11 August: <[http://www.telstra.com.au/abouttelstra/investor/docs/tls339\\_briefingpaper.pdf](http://www.telstra.com.au/abouttelstra/investor/docs/tls339_briefingpaper.pdf)> (18 April 2008)
- Turner, I. (1979), *Industrial Labour and Politics: the dynamics of the labour movement in eastern Australia 1900-21*, Hale & Iremonger, Sydney.
- Xavier, P. and Ypsilanti, D. (2007), 'Universal Service in an IP-enabled NGN Environment', *info*, Vol. 9 No. 1, pp. 15-31.
- Xavier, P. (2006a), *Rethinking Universal Service for a Next Generation Network Environment*, DSTI/ICCP/TISP(2005)5/FINAL, OECD, Paris, 18 April.
- Xavier, P. (2006b), *What Rules for Universal Service in an IP-enabled NGN Environment?*, NGN/03, ITU, Geneva, 15 April 2006.
- Xavier, P. (2003), *Universal Service Obligations and Broadband*, DSTI/ICCP/TISP(2002)4/FINAL, OECD, Paris, 22 January.
- Young, M. (2005), 'The Future of Universal Service. Does it have One?', *International Journal of Law and Information Technology*, Vol. 13 No. 2, pp. 188-205.