

# Rural telecommunications POLICY REFORM

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SYDNEY - 2002

Edited by Chris Dalton & Mark Armstrong



**NETWORK INSIGHT**

AN RMIT UNIVERSITY RESEARCH GROUP



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**Edited by Chris Dalton and Mark Armstrong**



# Preface

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This is not just another of the many reports on rural and remote telecommunications in Australia. It attempts to summarise the issues and point to possible changes in a more direct way: and without the usual circumlocution which a politically sensitive topic attracts. The purpose was not to re-visit the usual arguments about the cost of the universal service obligation, or the comparison between metropolitan areas and remote areas. It simply aims to draw together clear thinking about the issues, in the hope of a better outcome for users and providers of telecommunications.

Following the common practice used by Network Insight, we first prepared a research paper, then hosted a round table discussion by experts from different viewpoints. The project was possible because Chris Dalton kindly agreed to give Network Insight and the public the benefit of his years of experience through the research paper. In his previous role at Vodafone, he worked on these difficult issues on a daily basis. He also has the benefit of earlier experience at the Department of Communications, and so he is aware of both the carrier's perspective and the government perspective.

The credit for the research paper lies entirely with Chris, but as with all Network Insight projects, this complete publication included input from members of our team: Nico Roehrich, Sarah Barns and Kirsten Harley. Each made an editorial contribution to the pages which follow. Each of the participants in the round table kindly gave up their time to contribute to the discussion and to revise the transcript. We are very grateful to them also.

Mark Armstrong

St Leonards, Sydney  
5 August 2002



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# Abbreviations

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ACA	Australian Communications Authority
ALP	Australian Labor Party
AMPS	Advanced Mobile Phone Service
ATS	Alternative Telecommunications Service
BARN	Building Additional Rural Networks
BTCE	Bureau of Transport and Communications Economics
CSG	Customer Service Guarantee
CUSP	Competing Universal Service Provider
DCITA	Department of Communications, Information Technology and the Arts
DDSO	Digital Data Service Obligation
FCC	Federal Communications Commission (USA)
GSM	Global System for Mobile Communications
ISDN	Integrated Services Digital Network
ISP	Internet Service Provider
kbps	kilobits per second
NLA	Net Loss Area
NtN	Networking the Nation
OTC	Overseas Telecommunications Commission
PMG	Postmaster-General's Department
PUSP	Primary Universal Service Provider
RTIF	Regional Telecommunications Infrastructure Fund
SDDSO	Special Digital Data Service Obligation
STSRG	Standard Telephone Service Review Group
USO	Universal Service Obligation



## Part I – Issues and directions

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This paper deals with the current state of telecommunications services for rural and remote Australia. For simplicity, we use the word ‘rural’ to include rural and remote. The paper differs from the usual official reports on this much-debated topic, by aiming at the core of the issues. We do this through three mechanisms:

- this brief summary of the issues
- the record of a round-table discussion of experts
- the research paper by Chris Dalton.

The purpose is to cut through the rhetoric, and to get straight to practical answers about how to meet the reasonable needs of rural telecommunications users within the next five years. It is difficult to look ahead, because the players and policy makers are locked into an existing regulatory game, and the politicians are locked into a pork-barrelling exercise. This limits the ability of the official public process to offer fresh approaches, or to make realistic trade-offs which might require that the whole scheme be changed.

### ***The state of play***

For the last 10 years, we have seen an abundance of policy, money and attention devoted to rural telecommunications, but consumer disappointment about the results. There seems to be a consensus that the problem continues. Rural telecommunications produces an annual revenue of around \$825m per year, less than five per cent of the total Australian market. Yet the topic occupied 33 per cent of all media releases by the Minister for Communications and the Arts in the three years following the federal election in 1998. So here is an issue demanding political attention out of all proportion to its size.

The issue consumes an increasing amount of government spending. From 1991 to 1996, no Commonwealth funds were specifically allocated to rural telecommunications initiatives. For the five years from 1997 to mid-2002, \$819m was allocated through schemes such as Networking the Nation. In the private sector, the same five years saw the universal service trans-

fer over \$2,200m between carriers through levies. In addition, there are high administrative and transaction costs: dozens of legal, regulatory and accounting personnel minister to the scheme.

### ***The current policies***

This is a very brief summary of the current policies:

1. The universal service (‘USO’) regime in the *Telecommunications (Consumer Protection and Service Standards) Act 1999* is administered by the Australian Communications Authority (ACA).
  - a) The regime was created to implement the principle that ‘all people in Australia, wherever they reside or carry on business, should have reasonable access, on an equitable basis’ to telecommunications, including digital data services.
  - b) All carriers must pay a levy, based on their gross revenue (and reflecting their market share) in Australia to subsidise services to loss-making areas.
  - c) One carrier, normally Telstra, is obliged to serve the loss-making areas. The levy is used to bridge the gap between the revenue from those areas and the cost of serving them.
2. Apart from the USO regime, Commonwealth funds, which came originally from the sale of shares in Telstra, are used to fund targeted schemes for increasing the level of services. The government usually calls this expenditure the ‘Telstra social bonus’, and it makes up the \$819m mentioned above. Funds have been used for many programs, including: rural transaction centres (\$70m), Intelligent Island (Tasmania,

\$40m) and improved Internet access (\$36m).

3. It is assumed that at some stage the market will make the USO regime and the government spending unnecessary, although nobody has explained how and when that will happen. Presumably, technologies such as terrestrial wireless and satellite will reduce the cost of providing rural services to near the cost of metropolitan services.
4. Parliament and the government have been willing to intervene actively, and to spend public money, to improve services. Competition does not appear to be a prime goal. This is a sharp contrast with most other areas of Commonwealth government, including the rest of telecommunications, where the aim for the last 10 years has been to liberalise, and to place increasing reliance on the market.

Regulated price caps set a limit on the services provided. Another limit is the definition of the 'standard telephone service' and the 'digital data service' under the Act. This requires the government to make quite direct decisions about how much service should be provided to Australians in rural areas. When suggestions are made that the level of service should be increased, carriers make the obvious response that higher service will raise the cost even more. For example, in the 1998 Digital Data Review, the ACA concluded that the costs of maintaining an ISDN service providing a 64 kbps digital data channel as part of the USO would outweigh the benefits and that government intervention was not economically necessary or justifiable. The government subsequently introduced a special subsidy to assist customers in the most remote part of Australia to gain access to an asynchronous satellite-based ISDN service.

### ***Where will the current policies lead?***

The current approach would assume that telecommunications is maturing enough to respond to changing consumer needs. In the meantime, the government is seen as providing the safety net: the carrier-funded USO scheme, augmented

where necessary by direct government funding and one-off grants.

It should not be assumed that the status quo is stable. Some real improvements in service have been made in the last 10 years, such as providing local calls at an untimed, capped rate (currently 22c). But telecommunications needs keep changing as quickly as old problems are solved. More recent demands are for better mobile, Internet and broadband services.

As services improve, consumer expectations seem to increase. Specifically, there is always a new service in the metropolitan areas which rural consumers believe they should have, under the 'equitable access' policy. It is quite possible that rural and remote consumers will continue to be dissatisfied, and that the current need for government subsidies will continue to increase.

Nor is there much evidence that the rural market has reached competitive maturity. In the five-year period starting in 1997/98, little more than \$25m of rural telecommunications subsidies was allocated to Telstra's competitors. Yet in the same period, Telstra received over \$1,535m. This reflects Telstra's role as the carrier of last resort, the only one serving most rural markets.

### ***Incentives vs lowest common denominator***

The USO scheme is focused on ensuring that rural consumers receive a basic level of service, by bridging financial gaps between the service which would be commercially viable and the service the government sees as essential. The details of the scheme set out in the research paper suggest that this encourages a lowest common denominator approach. It is not in the interest of the carriers to offer extra levels of service, as they do in the cities. If they increase the levels of service, they will only increase their costs, not their profits. It is worth considering whether the scheme could be changed, to encourage competition to provide a higher level of service, and to introduce more carriers.

The parliament has been careful to ensure that prices for basic telecommunications services are capped. This is an understandable policy goal, to ensure that nobody must pay more than a fixed amount for a basic service, such as 22c for a local call. However, the price caps collide with the option of promoting an increase in service

levels in rural areas. In a normal market, the competitors offer a higher level of service for a higher price. However, the price caps often remove this incentive in rural areas.

### ***Would the market deliver better results?***

Many of the experts believe that if there were no USO scheme and no subsidies, the market would already be delivering a better service to rural Australians than they receive now. The most likely scenarios would be more innovative use of wireless technologies, including satellites. There is no doubt that most rural consumers value telecommunications highly, and would be prepared to pay for better services.

However, nobody knows exactly what the competitive market would deliver. The current networks and services have been moulded by the current schemes, so that it is not possible to make an accurate economic projection from the current market to a free market. Competitors have little incentive to plan or demonstrate what they could do, because nobody believes that the current schemes will end. And it is not possible to project figures from current services in the densely populated areas, since they use a different mix of technologies and strategies.

### ***Why do the current subsidy schemes exist?***

Surprisingly, there is no simple answer to why the current schemes exist, as the discussion in the round table demonstrates. The official reason is to be found in the Act, quoted above: so that 'all people in Australia, wherever they reside or carry on business, should have reasonable access, on an equitable basis' to telecommunications, including digital data services. But the real question is why the current package of regulation and subsidies is applied to telecommunications. The official documents take the need for special treatment for granted. Other services such as electricity, banking, broadcasting and post receive nothing like the same equality of geographic treatment. Furthermore, telecommunications is the only area in which the Commonwealth intervenes so directly. The answer is not to be found in the constitution, because the Commonwealth could decide to man-

date equity or equality for just about any area of service.

It is generally accepted that living and working in rural areas involves a mix of advantages or disadvantages. People are free to live in large centres where electricity, banking, broadcasting and post will have higher levels of service, or to pursue the opportunities of a rural location, where those services will be less. The main principle which the experts could point to was the highly networked nature of telecommunications. It is possible to install an electricity generator on a remote property to provide power, but a remote telecommunications service has little value. Its value for users depends on being connected to all the other users. But this does not fully explain the level of special treatment for telecommunications.

The consensus is that political forces, not rational principles, are the basis for the telecommunications schemes. Since 1901, telephones and post offices were used to attract votes for political parties. This has increased since the government sought to privatise Telstra. The current government position is that Telstra will not be fully privatised until rural telecommunications services are seen to be satisfactory. All telecommunications experts agree that there is no foreseeable possibility of the market being allowed to decide the quality or extent of rural telecommunications, not even if Telstra is privatised. Thus, realistic strategies to improve services need assume that there will be schemes of some kind to reassure rural voters.

### ***Incentives: is there a middle ground?***

Is there a way to increase competition without entering the political 'no-go zone' of a free market? Most ideas for encouraging competition run into the problem that if a rural area is already unprofitable for one carrier, Telstra, then splitting the available revenue between two carriers would make it even less profitable. However, the USO scheme might be able to use competition to actually change the economics of rural telecommunications service provision. In the search for reforms along these lines, the research paper produced these two possibilities:

1. USO subsidies (paid by all carriers) for a contested area could be increased until

a carrier determined that it was more commercially attractive to become a registered universal service provider than to pay an increased levy to subsidise Telstra's operations in that area. In other words, USO subsidies would be used actively as behavioural incentives, rather than just being compensation for meeting a regulatory obligation. The subsidy increase would provide financial motivation for a carrier to enter a rural telecommunications market when the net cost of entering the market became less than the increase in its USO levy.

2. The use of tenders to select an exclusive universal service provider could be applied in more areas. For the most remote areas in Australia (the 'extended zones'), in 2001 the government awarded a contract to Telstra for an exclusive universal service franchise, based on selection criteria that sought commitments to more than minimum USO service levels. The same tendering process could be applied to rural areas adjacent to the extended zones. Carriers would then be motivated to commit to more than minimum services in order to win the contract to serve them.

Neither of these options would endanger the basic USO principles. The competition would be an extra element, opening the future possibility of market forces increasing service levels. Discussion at the round table raised some challenges to the options. There was debate about the cost of the changes. One view was that increasing USO subsidies in option 1 would flow through to an increase in the cost of services. Against that, it was argued that the increases would all flow back to carriers under the scheme, so that there would be no net increase in real costs. There is also an issue about the amount of active regulation these changes would involve. On the one hand, the ACA or some other regulator would need to be pro-active in assessing markets, and work to encourage competitors to enter. This goes against the current fashion, in which Commonwealth regulators (except the ACCC) follow a hands-off approach. On the other hand, the Commonwealth is already closely involved in details of rural telecommunications.

## PART II – Record of the round table

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### 1. Participants

Mark Armstrong	Network Insight
Andrew Briggs	Telstra Countrywide
Charles Britton	Australian Consumers Association
Phil Chynoweth	TransACT Communications
Chris Dalton	Dalton Communications
David Havyatt	AAPT
Ian McGarrity	IMW Media Services
Johanna Plante	ACIF
Paul Schoff	Minter Ellison
Tony Shaw	Australian Communications Authority

### 2. Purpose of the round table

The purpose of this round table, held on 5 March 2002 at Network Insight in Sydney, was to bring together well-informed people from different backgrounds to discuss some of the issues surrounding the Universal Service Obligation (USO) and related rural and remote telecommunications issues. It was hoped that by having this discussion at Network Insight, an independent communications policy group, there would be more scope for fresh and lateral thinking than the usual official processes allow. We were fortunate to have around this table a wider range of viewpoints than usually join such a dialogue.

The discussion was based on an earlier draft of the research paper by Chris Dalton. The final version of his research paper forms Part III of this publication.

### 3. About the participants

**PROFESSOR MARK ARMSTRONG** is the Director of Network Insight, and is also Info-coms Adviser at Allens Arthur Robinson.

**ANDREW BRIGGS** is Group Regulatory Manager at Telstra Countrywide, the main player delivering services to rural areas.

**CHARLES BRITTON** is Senior Policy Officer, IT and Communications at the Australian Consumers Association, and has a career background in the ICT sector.

**PHIL CHYNOWETH** is Group Manager of Sales and Marketing at TransACT.

**CHRIS DALTON** has several years' experience as General Manager, Government Affairs, at Vodafone working on these issues, and before that at the Department of Communications.

**DAVID HAVYATT** is Director, Regulatory at AAPT, and before that was at Hutchison Communications.

**IAN MCGARRITY** of IMW Media Services has planned and built rural broadcasting networks in his earlier role as Head of ABC Development at the ABC. His company now works on convergent solutions in rural Australia.

**JOHANNA PLANTE** is CEO of the peak industry body ACIF, and has also gained earlier experience of these issues as a member of AUSTEL, predecessor of the ACA.

**NICO ROEHRICH** is Deputy Director of Network Insight and works on telecommunications policy and regulation.

**PAUL SCHOFF** is a Senior Associate with Minter Ellison, a firm which has done work specifically in this area.

**TONY SHAW** is Chair of the Australian Communications Authority (ACA). As a senior executive in the Department of Communications, he created many of the laws and policies we now have.

### 4. Discussion of the issues

**MARK ARMSTRONG, Network Insight:** What are some of the basic issues underlying the current scheme for remote, regional and rural communications? What will happen if we continue with the current scheme in a relatively unchanged form? Will we reach that ideal point where rural telecommunications becomes prof-

itable, so that it no longer needs a USO? Will consumer expectations tend to run ahead of increases in minimum levels of service offered by the USO? What motive is there under the current scheme for carriers to provide higher levels of service?

**DAVID HAVYATT, AAPT:** I always find the rural communications issue to be a slightly distorted one. It is taken as a given that somehow or other we are meant to deliver the equivalent of a macadamised road to every location. In telecommunications this is accepted, but in other infrastructure decisions this assumption would have been dismissed out of hand. People would say: 'Of course you're not going to build a Royal North Shore Hospital in Tamworth' or: 'Of course you're not going to seal every road'. If we did that, we'd get caught accepting that equality of service is required. So the conversation always gets off on the wrong foot; we never discuss what are reasonable expectations.

Historically, the reason for this is that monopolist telcos around the world sold that story as their reason for remaining monopolists. They relied on the invention of the concept of universal service back at the start of the last century. Since then, the whole ethos has never been challenged. In the 1980s when monopolists began to be challenged, they reinforced this idea that competition would mean the end of universal service.

Global reach adds a final dimension. A whole range of things that ought, logically, to happen in regional communications, such as the emergence of suitable technologies, are not happening. There is no incentive for a person to build technologies particularly suited to rural areas. Rather than being determined by any analysis of the nature of the regional market, it is influenced by a logic that says: 'Because America's got the same kind of perverted outcome, and Canada's got the same kind of perverted outcome, so must Australia'.

**MARK ARMSTRONG:** Can you say more about what kinds of suitable technologies you had in mind?

**DAVID HAVYATT:** Well, the ACA's advice to the Minister on new USO arrangements in September 2000 argued that GSM technology would be a more efficient technology. When you consider the ability of CDMA base stations to be

daisy-chained, you conclude that there are some very good wireless technologies that would be suitable for rural deployment. But no-one's turning them out, because there is no vibrant demand amongst those trying to meet consumer demands. There are only people trying to meet a constrained regulatory demand. In other words, there is no-one really prepared to spend the money that these things actually cost.

**MARK ARMSTRONG:** If there was no USO regime, what kind of services do you think would be available to rural Australia that are not available now?

**DAVID HAVYATT:** If there had been no obligation to provide a USO and no obligation on Telstra to deliver, in the 1980s there would have been satellite services to regional and remote Australia. But you have to go back to the very simple fact that the Digital Radio Converter System (DRCS) program was only accelerated, and the Rural and Remote Areas Program (RRAP) only extended because of the threat of a satellite. One of the arguments for this, apart from the TV argument, which took a blessed long time to turn up, was a rural remote communications argument. Telecom was desperate to find arguments to stop the building of a competing telecommunications infrastructure.

**JOHANNA PLANTE, ACIF:** But surely the satellite solution still had to be subsidised to give the kinds of prices that we were getting?

**DAVID HAVYATT:** Yes, but I still want someone to tell me why we think it's right that the services are subsidised. No one tells me why that is right. I might love to run sheep in Pitt Street in the Sydney CBD, but I can't.

**JOHANNA PLANTE:** I have often thought about this because when my sister, living in rural Australia, got electricity (a long time before they got the telephone), they had to pay over \$14,000 to extend the line further down. Also, at Port Parham where we have just got water connected, in theory there is a \$2,000 infrastructure charge. It's only 60 km north of Adelaide, but we nevertheless had to pay for getting water in the first place.

The difference with telecommunications is that it has to be connected. For access to other forms of essential infrastructure, there are other options. I can buy a generator to get electricity. Electricity doesn't have to be connected as I can



actually generate it on the spot. I can get water tanks and get water that way. But with communications, the idea of everyone having a right to it came from the fact that there wasn't a ready alternative that gave you the same functionality. From that flows the USO. The generator gives you the same functionality as the grid.

**DAVID HAVYATT:** Let's continue the farming example. If the cost of providing a telephone to that farm is \$X,000, shouldn't that cost be included in the economic decision-making of the farmer as to whether he farms or not?

**JOHANNA PLANTE:** Well I think it was, because there wasn't an alternative. To electricity there is.

**DAVID HAVYATT:** I do understand that that is one of the reasons, but that still doesn't tell me why this is a cost to the farmer that we should be subsidising, as opposed to any other costs to the farmer we should not be subsidising.

**CHARLES BRITTON, Australian Consumers Association:** There are a number of parts to this question. One is why people thought of rural telecommunications as attracting a USO. That question can be answered historically, but the answer may not be amenable in today's world.

This leads to the second part of the question: Do we need it now? Of course, history and the present are inextricably connected. Nowadays, people think that telecommunications is somehow helping cure the curse of distance, and in turn limit the 'tele' bit in front of 'communications'. There is also the national development notion, and the community development notion: the principle of people being linked to the total society.

Looking forward, you can split the question this way: (1) whether it would become profitable and economic; and (2) whether there is some sort of developmental possibility for it to become self-sustaining. Then there are the questions about what the impact of technology is on that, and whether people's expectations will keep rising or will be met. This is slightly different to the subsidy argument.

**DAVID HAVYATT:** I agree. I come back to the circularity of the argument. Unless you are prepared to agree that at some point in time a person who values their communications has to express their preference in some way, you'll

never turn this into a place where you get people actively developing solutions and services. If all you are competing for is the size of a subsidy determined by any methodology whatsoever, you just don't get that outcome. I find it really intriguing when you go to a rural communications workshop and people talk about how really, really important communications is in rural areas. They effectively tell you that it is more important to them than it is to people in the city, and yet they are not prepared to pay more for it than someone who doesn't value it as highly.

**CHRIS DALTON, Dalton Communications:** I question that. Look at the ACA's USO calculations. It found that people in rural Australia pay on average \$1,600 per annum for their telecommunications. In metropolitan Australia they pay \$500 or \$600 per annum. So in practice people have paid more for telecommunications in rural Australia than they have in metropolitan Australia.

The second point I would like to inject into the debate is the underlying assumption about natural monopoly. We seem to be saying that there must be some action, because otherwise people in rural Australia have to pay more for their telecommunication services than people in metropolitan Australia. That is something that we should challenge; because of changes in technology and increased demand for services.

**DAVID HAVYATT:** I just don't know of any telecommunications technology which is cheaper to run for a lower population density than a higher population density.

**JOHANNA PLANTE:** That is exactly the point. Population density is the issue.

**IAN MCGARRITY, IMW Media Services:** Charles Britton was indicating that a whole host of cross-subsidisations exist, between the city and the country, and the country and the city in reverse. For example, country people subsidise the city transport system by a very large amount. The subsidies just exist; they are there, and the political reality is that they will continue to be there. Ross Cameron is probably the one in the Federal Parliament who most often questions some of these subsidy issues, and who wonders why the government tends to see a rural vote as worth more than one for him.

There is no sign on the political landscape that the cross-subsidies are going to diminish, so far as rural communications is concerned. I think that the political landscape says that the emphasis is on it, as it has been on it for the last five years. As I read the newspapers and the press releases, the emphasis on cross-subsidies is probably even greater now than it was in the early 1980s.

I wonder about the practical value of questioning the *raison d'être* of this political and social need, of questioning whether it is good for Australia, when country people have been encouraged in every forum to ask for more than they already have. They now see the USO subsidy as an inalienable right that the rest of the country owes them. I am not sure this questioning gets you very far, because it is there and it is not going to go away. Perhaps we should focus instead on the ways to satisfy the political and social needs.

**DAVID HAVYATT:** The only reason I always flag the justification for the subsidy, and like to flag it first and then move on, is because every time we say we will improve something, customers' performance expectations rise. So the first thing to happen is that the customers become less happy. We should continually go back and re-question the need for government intervention. It's quality management 101 in which the government has now caught itself.

**IAN MCGARRITY:** I am reminded of an Oscar Wilde quote. One party says to another: 'I don't know why she hates me so. I've never done anything for her'. I suspect when you are giving subsidies to people you are tied into them disliking you more than if you have never given them anything.

**DAVID HAVYATT:** If we don't try to find the circuit breaker we will never improve the situation.

**TONY SHAW, ACA:** This issue comes back to a question of government philosophy with the current arrangements firmly entrenched in the system. Prior to 1989 national pricing concepts were purely voluntary. They were only entrenched through government regulation starting in the early 1990s. Even so, they only apply to a very limited number of services. There is no reason why service providers cannot compete on

any number of enhanced services and charge what they like.

**CHARLES BRITTON:** It is also useful to bear in mind that telecommunications is one of the areas where there is some protection of consumers' ill-gotten, or otherwise, right to services. Compare this to what has happened to the banks, government and other services. Consumers have a case study of protected and subsidised services, for better or for worse. Look at what services have disappeared under an unprotected free market operation.

**DAVID HAVYATT:** I've repeatedly apologised to every rural consumer I can ever find for the closure of their banks. The ubiquity of telephony is the prime reason that bank branches were able to be closed in rural Australia. If the telephone hadn't got to everybody, the bank branches couldn't have closed. So the USO was responsible for the closure of bank branches.

**MARK ARMSTRONG:** This leads us to another basis for having a scheme, even if the current scheme has a lot of defects. From an academic viewpoint you could analyse the system as a political scientist might, and say that the way the electoral system and the Senate works, the way some coincidences, almost, of the parliamentary system have worked, has resulted in a very high emphasis being placed on rural Australia. A good example is the role of Senator Harradine in the part privatisation of Telstra. So the political science view would be one that said: 'Forget about whether it's right or wrong, it's just a fact of life'. As Ian McGarrity said, there have been all kinds of schemes driven by similar imperatives, going back to soldier settler schemes, to subsidies for various rural produce. This doesn't mean it's good or bad, it's simply something that happens, and that may need to be taken into account in any reform process.

But there's another much more modern version, namely about a vision for the future of telecommunications. This is rarely expressed as a visionary modern concept. Rather, it is expressed in terms of the objectives that are now in the Telecommunications Act about Australians, wherever they live, having access to these services. It's like a very partial version of the Malaysia 20/20 vision, or the Singapore *Intelligent Island* vision, or *e-Japan*, or the Korean program called *Korea Cyber 21*, which relate to the urban populations in many developed coun-

ries. They are visionary programs which try to embrace a nation's citizens and bring them into the electronic world, to boost GDP and to maximise efficient use of resources.

Some would argue that a scheme that really did improve rural telecommunications was at least offering that sort of vision to part of the population. I don't know whether anybody's done this, but somebody might try to undertake an economic analysis of the whole package of rural services and discuss the efficiencies of, for example, substituting on-line banking for banking over the counter, for monitoring stock prices on the internet, for e-education and telemedicine.

In a strange way, in an era where vision is politically incorrect and unfashionable, we actually do have a vision expressed in stronger terms about rural Australia. Although this does not help to decide how to migrate to a better outcome than the current scheme.

What options are there? A market-based solution? A competitive allocation system as outlined in the research paper? How do you implement any radical change? To put it in other terms, how would you move to the market system which David Havyatt was indicating with all of its advantages, while still having some kind of a safety net for people who might otherwise be left without any service? Is it always going to be the case that, so long as there is a safety net, you can't really have a market-based scheme? That the safety net will distort the market so much as to prevent the market from ever getting started?

**CHRIS DALTON:** I'll just make one input here, about the issue of whether a natural monopoly exists or whether we are talking about the high cost of delivery. We talked earlier about how it's more expensive to deliver services in rural Australia than in metropolitan Australia – but this doesn't necessary preclude competition existing there.

In looking at what options we have for the future, it seems to me that we've not determined yet whether a natural monopoly still exists in rural Australia and, therefore, whether we have to develop a model based on only one supplier providing a service. Or whether, given no subsidy at all, a satellite solution would be afford-

able. If so, we may not need a subsidy, as an affordable service would be available.

So we need to establish whether we should be modelling systems based on one supplier providing the services (we could also talk about the range of services to be provided, which is getting into Ian's area of convergence) or whether we consider structures that use competition to improve the service levels.

**MARK ARMSTRONG:** How do you model the competition without actually having a competitive market? Does that mean yet another large report by an economic consultant?

**CHRIS DALTON:** No. The first thing to look at is the Extended Zones tender where a competitive approach was used to deliver an outcome of just one carrier provision.

**TONY SHAW:** It's not one carrier provision, it's just that only one carrier is subsidised. Anyone can provide services in the Extended Zones if they want to.

**ANDREW BRIGGS, Telstra:** That is a good example. Satellite is one solution where it is efficient to have more than one supplier. The model that was adopted in Extended Zones, the reverse auction model, has also been adopted in other countries. It is an exclusive model where you just allow one competitor to come in and tender for the provision of that service for two or three years. This offers one potential solution.

**CHARLES BRITTON:** We go back to one of David's base level questions. There is a lot of schizophrenia in the debate about the role of technology. On the one hand technology is seen as a breaker of natural monopolies. On the other hand technology can compound the problem of a natural monopoly as people expect more and more, leading to larger and larger subsidies.

**JOHANNA PLANTE:** Tony, I understand that nobody has registered to become a competing USO provider in the two pilot areas. That must tell us something.

**TONY SHAW:** Perhaps I can explain that. There are two principles that drive forward the sensible debate about universal service arrangements.

The first is that no government will ever walk away from the concept of Universal Service. They are just not going to do it – that is a reality.

The second is that no government is going to tell any group in society that they cannot have access to competitive supply if they so choose. These are two fundamental givens that drive policy in this area.

In relation to competition, the emphasis should be on provision of service that society believes is appropriate, for whatever reason. Whether it is competitive supply or not, really doesn't matter. The concept of the contestable areas is to allow anyone who wants to enter to provide service, to receive a subsidy based on the number of customers it serves. It's not necessarily about competition because Telstra, if it so chose under the arrangements, could in fact walk away from it. Although Telstra is a carrier of last resort, it need not be in there actively providing service if USO provision was taken over by some other supplier.

**DAVID HAVYATT:** With regard to contestability pilots, it was particularly unfortunate timing that when the pilots finally were announced, most of the established carriers were engaging in capital reduction programs. It is not now a resource priority to enter these markets. If contestability pilots had been around from 1997 when people were able to access large sums of capital, who knows what might have transpired.

**TONY SHAW:** Well, I'm not sure that that is actually correct. The calculation of the subsidies is based on cost recovery, after taking actual revenues into account. This suggests that if anyone enters the USO market on the basis of those costs, thinking that they can make money, then the ACA subsidy model is wrong, because it is based on a break-even answer. The only reason to enter is because it is on the companies' broad competitive agenda of having a broader delivery of services across Australia, generalising brand names and similar benefits.

**DAVID HAVYATT:** That ignores the importance of common costs. If you used a CDMA network to supply a subsidy service, there would be mobile revenue from that service that would make an additional contribution to the cost of the investment capital. But because we are not looking at new ways to invest money, there is absolutely zero work going on.

**ANDREW BRIGGS:** In the last couple of years there have been two contestability models. Portable subsidies, which apply in USO contesta-

bility arrangements, and the exclusive subsidy model in the Extended Zones tender. The Extended Zones tender attracted four tenders as I understand it. Another major difference between it and USO contestability pilots is that the government provided an additional \$150 million subsidy in the Extended Zones tender.

**IAN MCGARRITY:** The government could have done it another way. It could have said: 'I want this particular set of services to be delivered. What are you going to bid to deliver them?'. What actually happened was an abnormal tender, as the government said: 'I will give you \$150 million if you win this tender'. Clearly from the response (at least from Telstra's perspective), \$150 million, was over the mark for producing the base level of service because Telstra was doing a lot more within that amount.

**ANDREW BRIGGS:** If the amount had have been zero dollars would you have really got any tenderers?

**IAN MCGARRITY:** No, of course not. But the normal way to manage a tender is to say: 'I want this task done, how much will you need to be paid in order to do it?' In this case, the tender manager said: 'I've got \$150 million, how much can you do for it?'

**PAUL SCHOFF, Minter Ellison:** The result may then be a distortion of competitive neutrality by allowing some unnecessary 'fat'. Maybe that is what led to the subsidisation of the two-way satellite boxes for Internet access. It raises questions about what range of services should be subsidised.

**CHRIS DALTON:** Does it matter that there might be some fat if what has happened as a consequence of the tender is that Telstra is delivering more than the minimum service required?

**PAUL SCHOFF:** It does matter if the other carriers are paying for it.

**DAVID HAVYATT:** We're not paying for part of it, but what you have now is a bizarre outcome where the most remote people in Australia get a better USO service than the next tier. This creates some dynamic tension.

**TONY SHAW:** I suspect this will continue, in which case the government will have to respond. In answer to Johanna's earlier question, there have been no new entrants registering in the

USO contestability pilot areas. We have made guidelines available, but to date there have been no registrations. In part it goes to the issues that David raised about deployment, lack of interest in investment and the like.

**MARK ARMSTRONG:** Tell us about competitive entry – the history of it and the policy, and the simple point that no one has tried doing that so far.

**TONY SHAW:** The policy goes back at least to when our current Minister took over the portfolio. During a speech in around 1996 he expressed interest in the concept of competitive tendering. While it took a few years to devise a model, we now have a trial system under way.

I guess the government's policy, which I am not particularly close to other than administering the arrangements, is to assess what happens and then make some decisions about whether such a law should be applied on a more extensive scale, or whether other arrangements would be more appropriate. It is in many ways driven by the desire of carriers who said that they wanted to have the opportunity to provide service in loss-making areas, and were interested in getting some of the subsidy, at a time when, under arrangements that applied at the time, there was only one universal service provider prescribed by the rules.

**ANDREW BRIGGS:** Contestability was introduced because other carriers said to the government that 'We can do it cheaper'.

**CHARLES BRITTON:** It's interesting too that in some ways, (and it was always one of our concerns about the approach), contestability is hostage to the business cycle. A carrier's interest waxes and wanes but the necessity of those areas being connected is a stable one. The capital drought impact illustrates this perfectly. Fortunately, we didn't have to have burnt toes to find that out.

**TONY SHAW:** This is why there is a concept, even in contestability models, of a provider of last resort.

**JOHANNA PLANTE:** What is it that people in Extended Zones didn't have, that people in metro areas had?

**TONY SHAW:** Untimed local calls and comparable internet access.

**JOHANNA PLANTE:** What about the pilot areas? With some exceptions (such as ADSL accessibility) do those areas have exactly the same access to telephone services as people in metro areas?

**ANDREW BRIGGS:** In terms of standard services they do.

**JOHANNA PLANTE:** So what is it that we're trying to solve in those areas?

**ANDREW BRIGGS:** Presumably, one of the things they are trying to solve is the reality of variable data rates.

**JOHANNA PLANTE:** This is no different in metro areas. Even people who have got ADSL talk about how variable their data rates are.

**DAVID HAVYATT:** The Besley report identifies a few of those issues. The two stand-outs are: (i) differential mobile coverage (you can't get mobile coverage at Barraba, as Tony Windsor quotes on a regular basis); and (ii) quality of service.

For example, because a reduction in call charges has increased call volumes and traffic congestion, there are now actual instances in regional Australia of people not getting dial tone when they pick up the phone. This is a new phenomenon. Quality of service is a difficult issue, as the Customer Service Guarantee reminds people in regional Australia that they are worse off. A two day service guarantee in the bush contrasts poorly with a two hour service level in metropolitan areas. Thus de-facto government policy is to reconfirm to the people in regional Australia that they are worse off every time that they talk about it.

The mobile service issue is bizarre. We have spoken about natural monopolies when there are still three mobile operators trying to provide coverage at the fringe of mobile networks. Economically it would be of benefit for there to be a shared network in areas of lower population density.

**JOHANNA PLANTE:** All three had the requirement to meet certain coverage commitments.

**DAVID HAVYATT:** But they kept going.

**JOHANNA PLANTE:** Not all of them.

**DAVID HAVYATT:** They all have now.

**ANDREW BRIGGS:** The contestability arrangements were designed to allow carriers to offer mobiles. They created the concept of an “alternate telephone service” which could very well be a mobile service.

**DAVID HAVYATT:** I am stunned that there are still mobile base stations being built at the fringes of networks just to grow coverage, particularly if there are two of them being built in areas where the volume of traffic would only ever justify one. It would be economically more efficient for all concerned if they agreed to share the base station.

So why are mobiles still as expensive as they are? The only conclusion that I can reach is that a large amount of capital is still being spent on extending the networks into areas where there is less dense coverage. Otherwise the prices of mobiles should have been falling a lot faster than they have been.

I actually don't know the answer. It's just something that continues to intrigue me. Where has the incentive gone wrong?

**TONY SHAW:** There is no regulatory constraint. It's purely a commercial incentive.

**DAVID HAVYATT:** But where is the commercial incentive when competing on coverage is no longer the game?

**CHRIS DALTON:** I'd like to return to what Johanna said about the contestability areas, vis-à-vis Extended Zones and what you are seeking to achieve. All we are trying to do is to achieve a lowest common denominator in terms of guaranteeing a minimum level of service for people in those areas. Under current arrangements, people in the contestability areas have that same minimum level of service as people in the metropolitan areas; so no further regulatory intervention is necessary.

The issue is, perhaps, changing consumer expectations. Is the government just trying to ensure a minimum level of service? With a contestability approach, customers will have a choice of service ranges and different tariffs. So in this instance competition acts as a lever to increase the level of services the consumers receive.

So is government policy trying to achieve minimum service levels or something more than that?

**JOHANNA PLANTE:** Some contestability outcomes don't exist in the metropolitan areas either, where there is still only one local loop, except for the six duplicate ones in the capital cities. I just don't know what additional competition will occur beyond that. For example, I don't expect to get additional competition in, say, Glebe. I'm not saying that people shouldn't have it, I'm just saying you're unlikely to get it unless you are in the CBD and/or with a big company where you can get optic fibre going past your door.

**CHRIS DALTON:** Do you think it matters that there are no carriers registering in the contestability areas? Or do you think that policy outcomes will be achieved just by creating contestability areas, as it provides greater ability for a carrier to enter the market? Who is going to compete against Telstra, when Telstra has exclusive access to the subsidy? You start from behind. But in the event that you can get access to that subsidy, there is a different dynamic in the market place that puts a greater competitive pressure on Telstra. Having created that, does it matter that nobody's come in?

**JOHANNA PLANTE:** It does, because you don't know whether the correct model was adopted or whether the model made sense in the first place.

**ANDREW BRIGGS:** There are no guarantees, but it gives you the greatest chance of having competition in those areas, because it puts Telstra and the other players on equal footing. Telstra currently offers services in those areas and receives a subsidy. If the other carriers are going to compete in those areas they should also receive a subsidy provided they make the same commitments as Telstra to serve all customers. It doesn't mean you're going to get competition, but at least it gives you a better chance of getting competition.

**CHARLES BRITTON:** Things that facilitate entry, even in an emotional sense, are politically useful. It distances politicians from the problem. If there's not competition in these areas politicians can say: 'Well, don't blame us, we've done everything we can'.

On the other hand, to agree with Johanna, competition should not be an end in itself, but a means to an end. The services on the ground matter, not competition. So the question be-

comes: 'How much more do we spend to generate competition that doesn't matter?'. Did we need to spend \$150 million to buy competition, particularly when alternate carriers didn't actually win the race? So it goes back to the original point, that we are here to deliver services on the ground, and not to deliver a theatre show, or competition.

**DAVID HAVYATT:** I must set the record straight. DCITA and others have added the Extended Zones tender to the story of contestability, although this wasn't how that program started. Originally, when the Minister identified a need to get local calls in Extended Zones, Telstra's response was to say that it would cost \$150 million. Following this, the Minister decided to retain \$150 million from the second Telstra tranche, to be made available to whoever could fulfil the untimed local call obligation.

So it never was a policy directed at creating another contestability area or being another incentive for competition.

**PAUL SCHOFF:** One of the reasons for encouraging competition is to encourage innovation and better services. Experience shows, across all industries (such as television industries, and network industries), that lack of competition discourages innovation in service and reduction in cost. Therefore encouraging competition should also be seen as driving demand for broadband services. This includes all of those applications that local councils and governments are trying to fund with varying degrees of success. There are good reasons why competition can be seen as a good objective in the long term. Getting the service on the ground now is worthwhile, but if it also increases the already high entry barriers, then that is a bad medium- to long-term outcome for consumers.

**CHARLES BRITTON:** I agree. But it must be competition that makes a difference, and not just an ideological genuflection to competition. Not all the outcomes of competition are necessarily positive ones. Competition is a very important tool, but while it can be a good servant it can also be a bad master.

**IAN MCGARRITY:** If you don't have some degree of competition then, no matter how good the process was to establish the initial service, there tends to be an ossification between the service provider and the public about what service

remains acceptable past that initial point of innovation.

So, if there is no competition, you must put into that market place something that creates an ongoing assessment of what is a proper level of service, and what could be done to improve it. I can accept that the threat of competition can be the motivator and, in the end, a more positive social tool than actual competition.

There are two other matters I would like to raise. I read that facilities competition is difficult to achieve, particularly in rural markets. Should, therefore, we concentrate more on getting service competition based on shared access to common facilities?

The other matter is a bit anarchic. For each of the 40,000 households in the Extended Zones, Telstra will receive an annual subsidy of approximately \$875, together with a \$3,750 'flag-fall' payment. From this it will deliver what it considers to be the best service package. The issue is, how would the outcome differ from a voucher system, where the householders could choose what they wanted? Is a 'top down' approach the only practical system?

Would a radical approach of this nature have some role in USO policy? It works on the principle that you give the money to the consumer and allow the consumer to choose how to spend that money, having received sales information from service retailers.

**TONY SHAW:** Within that modelling, how do you provide a carrier of the class we're talking?

**ANDREW BRIGGS:** It's a potential model. ATSC, for example, has been arguing for some time that the USO that goes to providing services in indigenous communities should be "cashed out" and ATSC given the money to spend however they please on telecommunication services. However, while it sounds good in theory, there are no end of problems.

**TONY SHAW:** But when they can't get the service and they go to the government and say: 'We've got \$750 in our pocket but no-one wants to offer a service' what should the government do?

**JOHANNA PLANTE:** One of the difficulties is that telecommunications is a network business. You can't just go to the shop and buy your service for \$3,500. The interactive distribution

infrastructure has to come to you, to allow you to use it.

The people that live in rural areas know all the competitive issues. Consequently in the Telstra privatisation debate they demand mechanisms for guaranteeing ongoing good service. They know that in rural areas competition will not be a driver for these improvements, and so they know that they must use alternative mechanisms. They actually know from experience some of the things we are talking about.

**IAN MCGARRITY:** The network argument also raises this dichotomy between the facilities provision, and having a group of people willing to provide different levels of service over that network, at whatever connection fee is charged. I would imagine that the sparser the community, the greater the likelihood of a natural, absolute facilities monopoly. But that doesn't mean the services couldn't be dramatically different.

**JOHANNA PLANTE:** In terms of long distance competition, rural people do have access to competition via Optus, AAPT and whoever else provides pre-selected services. So they do have access to a choice of long distance services over the Telstra infrastructure.

**TONY SHAW:** The underlying obligation to provide service still remains in a model where you give people a voucher. In the particular case of Extended Zones, however, the objective was to get all people access to untimed calls, which they had demanded. The fact that the bid included an agreed data rate was a consequence of the competitive tendering process. What happens if you just give \$150 million to individuals and half the people cannot buy untimed local calls for the price of their voucher? That's the difficulty you face, as you do with any model that relies on giving consumers money or a voucher.

**MARK ARMSTRONG:** Why can't the people who receive the money or a voucher buy untimed local calls? Because nobody is providing them?

**TONY SHAW:** The reality might be that, of the 40,000 customers, 10,000 find that there is no service provider who is prepared to provide untimed local calls for the price of their voucher. And then, where is the Government with its policy? It must be able to guarantee the practicalities of achieving a policy.

**MARK ARMSTRONG:** Does this mean the USO levy is not supporting untimed local calls?

**TONY SHAW:** The arrangement that existed with the Extended Zones was that there was the competitive bid for \$150 million, plus the ongoing subsidy that is provided under the Universal Service arrangements, to provide untimed local calls to those customers who wanted it.

**CHARLES BRITTON:** The critical word is 'system' instead of 'vouchers'. The voucher idea doesn't build a good system. One of the fundamental problems of contestability is that it assumes the infrastructure exists. Contestability 'mines' the infrastructure for a purpose which is essentially political. The reason that you don't have contestability is that there is not the critical mass to justify building the facility you want there.

The problem of the uncontestable or the marginal customers, is also important. This is also becoming an issue as we go to contestability in energy. Commentators have suggested that 50 percent of electricity customers aren't really worth having as they generate such small amounts of revenue, although most rational large companies will engage in night-time deals with their customers and will continue to service them. But the notion of profit and loss is alive and well, as instanced by some banks saying: 'It's wonderful, let's get rid of the customers you don't make money out of'.

**ANDREW BRIGGS:** A lot of that \$150 million was needed to upgrade the network to provide untimed local calls. So it is almost impossible to cash it over on individual bases.

**CHRIS DALTON:** I wanted to respond to what Ian said about the vouchers and having a voucher system. In the contestability areas you have a virtual voucher system. You don't actually give the customer the money, but when the carrier acquires that customer they get the equivalent of the voucher paid to them. That system also addresses the carrier of last resort issue. If Telstra is the carrier of last resort and no other carrier enters the market, then Telstra must provide that minimum service.

The benefit of this arrangement is that there must be one carrier of last resort to provide a minimum service. There is also the flexibility for other carriers to offer a different range of services. This means that it is not the gov-



ernment or the ACA dictating the type of service to be provided. A customer is not forced to take the service that the ACA has specified, as a new carrier can offer a different range of services, which might more easily fit what the customer wants.

**ANDREW BRIGGS:** An important point in the Extended Zones tender is that Telstra wouldn't have been the carrier of last resort if it had not won the tender. Telstra would have had the option to withdraw its services completely from the Extended Zones had it lost the tender. This is different to the contestability pilot arrangements, where Telstra has been retained as the carrier of last resort, even if a competing USO carrier registers in an area.

**DAVID HAVYATT:** It is important to recognise that, while Universal Service was only mandated as a legal obligation in the late 1980s, the extension of connectivity to a lot of customers occurred in the early 1980s. This was a result of the arrival of satellite technology. Competition, or threat of competition, actually has a history predating today in this area.

An interesting distinction that Charles Britton has added to the conversation is that between making infrastructure happen in the first place, and how you make efficient use of infrastructure that is there already.

To move the conversation on, when we talk about users of telecommunications we need to determine what 'c' they are – whether they are consumers, customers or citizens. Gerry Goggin identifies the need to include citizens, because they are at the centre of this telecommunications debate. The citizens sit in a remote locality and say: 'I want more', but the person they say this to is situated in Canberra.

Telecommunications is the only service of this nature that is delivered to citizens in Australia by the Federal Government. Historically these kinds of services were better delivered by a local area, where the citizens have greater control. The more local the authority, the better the service delivery. This opens up the whole question of whether we've got the whole policy position wrong. The people who own the customer access network in regional areas should be the regional citizens, not the Federal Government.

This is a conversation that hasn't yet started. It is potentially an interesting one as it provides a dif-

ferent way of engaging the citizens themselves. Local politics could replace market forces as a means of meeting rural telecommunications development needs, although funding may still need to come from the Federal Government.

**MARK ARMSTRONG:** How, then, could we break away from one hundred years of pork-barrelling, including by the Postmasters General, who put post offices and the telephones in electorates that needed cossetting. If we're going to adopt a different model that's not based on the Commonwealth Government, how would such a process start? How would a shire council move on this? How would we, on a nation-wide basis, see shire councils deciding that they were moving further into the utility area and gather resources to provide this?

**DAVID HAVYATT:** The very first step would be for the Federal Government to endorse this approach by passing control of the local network to local communities because they can run it better. There is evidence in America of some remote area telcos managing a local network better, because they make local decisions about competing resources. It's not an impossible scenario.

**MARK ARMSTRONG:** What might the options be? A transfer to local ownership and control of part of the Telstra network? Funding to run the network? Or both?

**DAVID HAVYATT:** I would transfer the network. For a period of time, the same level of funding would be made available under current arrangements, on the understanding that no further assistance would be provided by the Federal Government.

**PAUL SCHOFF:** I'm glad this issue has been raised. I was thinking about this in the context of new infrastructure developments funded through Networking the Nation (NtN) and similar programs, that might be managed through an infrastructure trust.

While implementation would be complex, given our layers of government, it's easier to determine responsibilities with a direct funding program like NtN. It would require an operator, perhaps licensed through a nominated carrier declaration, and an access regime with pricing that addresses the competitive issues.

It may be too radical at this stage to hive off a part of the existing network. An alternative option may be to use new infrastructure.

**MARK ARMSTRONG:** How would an infrastructure trust work? What is it? Who runs it? What is its origin?

**PAUL SCHOFF:** This has been discussed, but as yet there is no set answer. On the NtN side where there's direct funding, you could vest ownership and control of the funded asset in the relevant authority. With the money given to telcos with not-for-profit partners, you could vest control of the asset in the not-for-profit partner. There would also be an access regime.

**JOHANNA PLANTE:** This is confusing. Is it just a series of local monopolies rather than one big customer access network monopoly? Are you just talking about country areas, or all of Australia – so that in Glebe, for example, Leichhardt Council would run it?

**DAVID HAVYATT:** I'm just talking about country areas. It would be a government monopoly, but run by the citizens in that geographic locale, rather than from a central location where an averaging approach across the country would be adopted.

**JOHANNA PLANTE:** In my experience I find it difficult to believe that there would be the requisite kind of expertise and understanding of operational matters in rural areas – or, for that matter, in Glebe.

**DAVID HAVYATT:** This is where the second part of Paul Schoff's suggestion comes in. The owners of the infrastructure would be in the business of hiring people to run their networks. So there may be five people across Australia who compete for the right to manage the council networks in such a way that they respond to the community and political requirements of that area.

**JOHANNA PLANTE:** Is it a practical solution at this stage? Where do you draw the line on which areas to include? Just remote areas? Just rural areas? Or regional towns, as well, like Geraldton?

**DAVID HAVYATT:** All these questions are wonderfully political!

**JOHANNA PLANTE:** With T3 to happen some time in the next couple of years, I can't see the government taking this step.

**DAVID HAVYATT:** It's an achievable T3 scenario, because the government re-buys the country network, gives it away, and then privatises the remaining assets comprising Telstra's network in the metropolitan areas. It can be done now.

**PAUL SCHOFF:** If you add to this nationalised regional network an access regime that operates in regional areas, then you would facilitate what people really want: useful applications and accessible broadband services.

**MARK ARMSTRONG:** What would an access regime administered by, for example the shire council, look like? Presumably not the current Trade Practices Act version, but one that involves timely judgements about what will meet community needs. Would the shire council, for example, grant access the way they give development approval for somebody to build a house or a shed?

**PAUL SCHOFF:** It should encourage as much access as possible in order to facilitate competitive service provision and competitive application set-ups. The application side will drive this. The simplest way to do this would be to set the access price when the funding is allocated.

**MARK ARMSTRONG:** So it's an access regime whereby a shire owns the capacity and sells carriage to anyone who use the asset.

**CHARLES BRITTON:** With the mission of servicing the people, its constituents and its citizens within the constituency.

**PAUL SCHOFF:** There would also be a charter that requires it to deliver services to all, like the USO, and with significant equity objectives.

**DAVID HAVYATT:** There are two ways this could be done. One is that you sell the right to manage access to the infrastructure as an exclusive franchise; the second is that you sell access to the infrastructure to many more parties on a commercial basis.

The person who owns that rural asset doesn't have the same economic incentives as Telstra. When you're a national telco you have an incentive to deny people to access your network,

as you want to be the only person to exploit its commercial value.

**IAN MCGARRITY:** This sounds like putting the facilities in public hands but managing them using a professional facilities manager.

The only experience I have of this is with councils running re-transmission facilities for radio and television. And they do a terrible job of it. For example, the Federal Government has the Television Black Spots Program, which provides initial capital, but no recurrent expenditure. I suspect that in 10 to 15 years time these facilities will start to fall over through the lack of maintenance and ongoing work by the councils. At that stage, the councils will quite cynically say: 'We're not in this business; the government needs to give us some money to replace the facilities' and at the same time let the community have no television or radio until the Government is forced to provide funding. That's what is happening in many places around Australia now, under the self-help program. But this probably arises where there is a relatively small facility, managed by a relatively unsophisticated council that doesn't understand the ongoing recurrent needs of facilities management

I assume that David Havyatt and Paul Schoff are proposing there be professional facilities managers engaged to run assets that are of a substantial size. In my experience you need to make absolutely sure that the local council clearly understands the complexity of the task, and that there is a clear allocation of responsibility for managing those facilities.

**PHIL CHYNOWETH, TransACT:** My company, TransACT, provides an interesting case study. During the 1990s when the broadband networks were rolled out in Sydney and Melbourne, but not Canberra, the ACT utility companies got together and decided to invest and set up a telecommunication company to provide broadband access to Canberra citizens. It made a lot of sense as Canberra has the highest penetration of PCs and internet users in Australia.

This provides a model for local council involvement elsewhere in Australia. Basically the ACT Government said ACTEW and AGL should do it. This struck a chord with AGL because they were looking at multi-utility models for delivery of water, gas, electricity and telecommunica-

tions. So they provided a means of funding the initiative that may not be available to a local council that relies solely on rates as income.

We're also examining similar initiatives elsewhere in Australia. Powertel in Newcastle is now setting up a telecommunications network infrastructure, which the major players had decided just wasn't worth it, or economic for them to provide. So this is something happening now in Australia. It's quite innovative and not a theoretical exercise. We'll see how it goes.

I'm struck by the viewpoint here that presumes that we know best for the citizen and the community. What we've noticed is that communities are deciding what services and applications they want. It's not necessarily base voice services, but the applications and a whole range of services and industries that are built on those services that people want. Often people in Canberra, or this group here, have no idea, but nevertheless make some big assumptions about what rural communities really want.

**MARK ARMSTRONG:** Phil, tell us something about the role of local government in Canberra in relation to what ACTEW does and, if you know any more about what is happening in other areas such as Newcastle.

**PHIL CHYNOWETH:** I can't speak for Newcastle, but the ACT government is a major investor in ACTEW, and TransACT is a joint venture between ACTEW and AGL. The ACT government was a catalyst in getting TransACT started, using ACTEW as a funding arm.

The important things are right of carriage and right of way. We are able to use and lay cable along the electricity passage, or under the conduits where AGL are putting their gas lines. This is probably the key issue for a small telecommunications player.

Competition has been there, if at all, only in name. Competition in telecommunications is not the same as competition in other markets. Most government policy assumes Telstra is there. This may not be the right policy but that is the reality. In Canberra we've noticed that with many of the businesses and government contracts, there isn't competition at all because Telstra has the local loop. It is very difficult for anybody else to compete with Telstra in such circumstances.

**MARK ARMSTRONG:** Does the ACT government have a governance supervision role in relation to ACTEW?

**PHIL CHYNOWETH:** Only through its directors. It is a privately owned company so the other investors such as AGL, TBG in Hong Kong, and ACTEW also have directors on the Board. There is a local chairman.

**MARK ARMSTRONG:** Is there a Code of Practice or a set of rules?

**PHIL CHYNOWETH:** Yes, of course, it has articles of association like any company.

**MARK ARMSTRONG:** That's the internal structure, but in terms of the external relationship with the ACT government, is that a contract, or is it anything more than having directors on the board?

**PHIL CHYNOWETH:** The ACT government is not yet a user of services. We don't have a contract with them at all.

**DAVID HAVYATT:** Lots of electricity authorities, many of which are still owned by governments, have engaged in similar activities under the guise of being a commercial initiative.

Logically, if there are two pieces of infrastructure being deployed down streets and requiring many of the same skills to run them, then there would appear to be scope for economies of scale to be achieved. Yet this does not happen. Similarly in regional and remote Australia, if there is one technician who fixes wire A and another who fixes wire B, there is scope for economies of scale, which could then lead to having more people closer to the customer, rather than engaged in running separate infrastructures.

**MARK ARMSTRONG:** It's economical from the service provider's viewpoint to have maximum sharing of facilities. This also ties in with user expectations in remote areas. In practical terms, telecommunications, broadcasting, post, Flying Doctor and emergency services all have a common life-line function, but they are all perceived in policy terms as separate niches which attach themselves to different planning, entrepreneurs, and systems.

**DAVID HAVYATT:** A further negative is that there are people in regional Australia who have got this all compartmentalised with a 'cargo cult' mentality: 'These things get sent to us from

Canberra, or whatever my state capital is'. This is further compounded by the dysfunctional way local government has been run historically, especially in regional areas.

But government should not give up on this. If there is a future for regional and remote Australia, it's going to be created by regional and remote Australia, not by any number of people gathered together in Canberra, trying to create it.

**MARK ARMSTRONG:** If each local government were provided with the basic telecommunications infrastructure, what else is needed? Obviously funding, presumably financed out of the proceeds of the T3 sale for hand-over and start-up costs. What if a local government says 'We don't want it, as we'd rather have an existing carrier or a national body like Telstra, continue to provide the service'? Is there a way to oblige them?

**JOHANNA PLANTE:** There would be many different views. In the NtN program some initiatives have come from local governments and some are a joint venture with a carrier, but many come from other parts of the community that are more pro-active in communications matters.

I also see that we are creating wonderful business opportunities for these facilities managers, but you need to do a lot more than just give local government money. You'd have to draw up contracts that the local governments could use to employ facilities managers and provide lots of assistance and guidance along the way. The 'Ma and Pa' telephone companies in the States have not been successes in the long term.

**PHIL CHYNOWETH:** I agree.

**JOHANNA PLANTE:** TransACT is a lot different. ACTEW is an electricity company.

**PHIL CHYNOWETH:** People are in telecommunications not for the base services but for all the applications that sit on top of them. Now the challenge is: who is in the best position to understand, exploit and capitalise on that? It's the people who are closer to the community who understand these things. I've spoken to farmers and they want quite different applications. They rely on long-term weather forecasts and improved productivity. Our farming community is so efficient because of the absolute boom that it had through the Internet. Internet is not a 'like to have', it's a 'must have' for efficient

agriculture. For example, one farmer has telemetry points and cameras on all of his bores around his very extensive property as an alternative to wearing out three or four vehicles every year. So what we provide through universal service arrangements to these people in rural areas may not necessarily satisfy what they need.

**JOHANNA PLANTE:** A few years ago, I made a presentation that defended not expanding the USO, saying that when it was voice, it was a homogenous product and everyone wanted the voice.

Now the USO is no longer homogenous. Some people want data, some people want video, some people want telemetry. Now we see all these other applications that people are using the technology for, but they are not coming through the local council. They are coming through many different groups such as the National Farmer's Federation or the local community library group. They don't come from the local government.

**PHIL CHYNOWETH:** Whether it comes from the local government or the local utility, there should be a focus on the applications or services of telecommunications infrastructure, rather than the means for providing them. This is a different perspective, but the approach is not going to deliver anything of use. It delivers mediocrity, as opposed to the innovation that that the country needs.

**ANDREW BRIGGS:** Are you saying that you don't necessarily need to divide up the current network assets to get those outcomes?

**PHIL CHYNOWETH:** No.

**ANDREW BRIGGS:** One of the reasons we started up Telstra Countrywide 12 months ago was to get local management closer to the people in the regional areas. Approximately five to ten years ago Telstra centralised many of its senior management roles. It is now moving them back into regional areas – this is one of the major reasons for establishing the business unit of Telstra Countrywide. This was a commercial, not political, initiative, as many commentators believe. Country customers are profitable in the main, just as they are in urban areas.

**MARK ARMSTRONG:** What areas are we talking about? Centres of the size of Dubbo, Wagga, Bathurst and Albury?

**ANDREW BRIGGS:** Yes, that type of area. The economics of serving a customer in an urban area is not greatly different whether it is in a metropolitan or regional area.

**DAVID HAVYATT:** The other day I was discussing with a Telstra employee how he had been sitting in a park in Goulburn two years ago talking to someone about finding accommodation for the Goulburn District Office. Twenty-two years previously he had sat in the same park with a Telecom manager, looking for an office for the then operations department to start up in Goulburn.

**MARK ARMSTRONG:** So Telstra Countrywide is about spreading managers across rural areas?

**ANDREW BRIGGS:** It is about a range of things - improving service, growing revenues, increasing the range of products and services, getting management closer to the customer, and better understanding the needs of country customers. Basically doing some of the things that you talked about before. You don't necessarily have to control all the network assets to do that. It's in the applications that sit on top of the network.

I have a number of concerns with this notion of somehow dividing up the network. I suppose my concerns parallel the points that Ian made. In theory it sounds okay; in practice there are many problems. The closest we have to this sort of arrangement are the community telcos, which don't necessarily own their network assets. Many of them are struggling at the moment for reasons such as lack of practical expertise in running a telco.

There are big questions about to what extent do local groups have the expertise to offer those services?

**MARK ARMSTRONG:** We might resolve those practical day-to-day management issues a little. In the hypothetical example of our shire telecommunications access network (a legacy from Telstra) is it likely to be offering a retail telecommunication service, or will it always have a player that's in a lot of markets retailing facilities to the customer? Can anybody help us paint the hypothetical picture of the typical shire telecommunications access network?

**DAVID HAVYATT:** This could operate as a version of contestable areas. The current alternative to contestable entry is contestable areas, where you divide up the world and offer the rights to manage. The first thing the council would do would be to invite in that person whose real job was going to be to manage the network.

There would also be an incentive to make as many opportunities available as possible for people to utilise this asset. There's a greater incentive for those network operators to volunteer access than there would be for multiple providers in an area. In addition, whilst each individual area is a monopoly, there is still some competition between the areas, and there's competition between who's going to provide.

To ensure a competitive dynamic remains in the infrastructure management industry it may be necessary to impose market share limits as has been the case with spectrum auctions.

**CHARLES BRITTON:** A number of points come up here. The innovation and diversity arguments that were made before are certainly important. For example, people tend to take for granted the base level of voice connectivity. In the pursuit of the innovation and diversity, you must not get some people dropping out of the voice networks as a consequence.

As in banking, if you too enthusiastically and naively seek diversity and innovation, and neglect to maintain base service levels (because you've taken them for granted), there may be unintended consequences of some people losing those services.

What we said during the previous election was that one size doesn't fit all of Australia. A big problem the government has in leading up to trying to privatise Telstra is that it is treating the whole of Australia as one big telecommunications puddle, which it is not. We suggested a geographic focus that recognises rural and regional issues as a separate problem.

While I know there is a lot of debate about this, and the economics are problematic, we should quarantine rural issues from wider telecommunications debate. It's an area with its own problems and issues and should be treated separately. Then we would be able to comment on structural separation of the rest of Telstra wholesale and retail. There should be both structural

and regional separation. Once there is regional separation then issues relating to structural separation can be addressed.

There could also be a transitional phase, managed on an experimental basis. Some areas might adopt the regional access model, and others for the regional monopoly model. The ACA could supervise the pilots, as there is no doubt a need to have ongoing Federal oversight. It would be very difficult not to have Federal Parliament involvement. They should have a positive role or they will just meddle.

**MARK ARMSTRONG:** A possible example might be remote area television and community television in rural areas. Although the process was a difficult one, it was possible to find a range of services including a number of services run by indigenous communities, to provide television to a great diversity of areas within Australia.

It's difficult because, for example religious, cultural and educational opportunities attract a wide range of groups to provide television and radio services. These services, however, aren't provided by local government authorities but by different regional, educational, church and local affiliated communities. Some are commercial and some non-commercial.

Another model, which might have the problem of engaging the Federal Government too much as a regulator or a monitor (and thus defeat the whole purpose of a fresh approach) involves letting the tender for the local telecommunications assets. It may offer the local government body some priority (if that body wants to take over the service), but also allows involvement by a local progress association or some other body with business skills, such as an agricultural co-operative, or a body that is already involved in providing other local utilities with some standard obligations.

Having put forward these models, I note that, unlike Germany or many western European countries where the local body and its burgers have perhaps 500 years of experience in running banks and a wide range of services, in many areas in Australia our local government entities were somewhat artificially created.

**DAVID HAVYATT:** This is a very important issue that needs to be recognised. Rural and remote Australia was built very rapidly based on

a capital cities' model; we never actually established rural and remote Australia. This hasn't been helped by the fact that over the last few years every government, not just Telstra, has taken the approach of recentralising decision making. The State government has been pulling administrative units out of regional and remote Australia. This is a far wider issue about how regional and remote Australia takes charge of running itself and becomes responsible for its own future. The whole telecommunications policy debate is distorted by that failing.

**TONY SHAW:** The only reason that there could be any support for such a model would be a judgement that the locals are better able to articulate, identify and supply the local demands, than a commercial operator.

There's at least one commercial operator in regional Australia now, so there must be some perception that another operator can provide a quality and diversity of service that meet these particular people's needs in a better way than the market currently supplies, despite the fact that the market already has an unbundled local loop, access regimes and all the other things that allow suppliers to get in and provide service and, indeed, to build infrastructure if they think there's a dollar to be made there.

Nor is there any guarantee that a local council wouldn't take any profits (if the network was profitable to start with) and churn them into something else, such as local libraries, rather than supply telecommunications services.

If a service is loss-making to start with, then why would a company take on that service and the risk of not having any money to supply it? The practicalities, let alone the objective you start with, suggest that a different model is needed.

**MARK ARMSTRONG:** Wouldn't the local government, equipped possibly with the current USO funding or something similar, have a far stronger motive to provide an access network than anybody else? Wouldn't they have other quasi-commercial reasons for wanting to ensure a good telecommunications infrastructure?

**TONY SHAW:** They might, but who's going to pay? Everyone would love to have a perfect system and not pay for it. I would like to be able to connect to TransACT without having to pay. The reality is that you've got to pay, and in in-

herently loss-making areas, how are you actually going to generate the revenue that will cover the provision of these services?

**DAVID HAVYATT:** If it's good policy to subsidise, then one could continue to subsidise the service, but the subsidy should be via a far more transparent process. For example, a subsidy worth three per cent of revenue could be levied and distributed, rather than there being some kind of torturous game of trying to estimate a genuine loss and pass it back to the largest player on the market. That is an absurdity. I'd prefer a transparent process of raising a tax and handing it out.

**TONY SHAW:** Why shouldn't these regional companies form part of the tax base?

**DAVID HAVYATT:** Let's have that conversation when we work out how we structure it.

**TONY SHAW:** There has been a long debate about USO subsidy levels, and there has also been a lot of confusion about how the subsidy levels underwrite what services rural customers really need. The sole basis of the last formal subsidy estimate that the ACA did is the provision of the standard service. It doesn't include the extra revenue that a supplier might receive from supplying other services in conjunction with the standard service. The methodology was built around a hypothetical network that is probably no longer relevant.

The way in which the value of the capital base is calculated is to use measures of the cost of alternate technologies. People confuse that with the concept that GSM, for example, might be the more profitable way of providing service in these areas. That isn't true. The best and cheapest way of providing services is probably the system that's there. It's just that the underlying capital base is only worth what the cheapest technology would be if you are going to replace it. So the GSM capital costs are just used as a substitute for the value of the network. It's not that you actually build a new network; rather you value what's there by estimating the cost of the cheapest alternative technology. Thus there is a misperception that you can provide universal service in a cheaper way than what you are actually doing now, in real resource cost terms.

Having said all that, the model probably has reached its use-by-date and is no longer a robust means of calculating subsidy levels. It's fair to

say that it doesn't allow for economies of scale when you're determining what the costs of the capital might be, say, with GSM networks as a surrogate for the current system.

So against that background, if there were to be any subsidy calculations in the future, there would need to be either a substantial addition to the model or some other method.

**DAVID HAVYATT:** Because it is so fallible, it would be just as good to choose any number we like as the amount we are going to subsidise these people, because of where they live. It's a political decision in the final analysis. Anyone who wants to use a well-reasoned economic model is mad. If you could successfully model what happens in competitive markets or efficient investment decisions, we'd live in a planned economy.

**MARK ARMSTRONG:** Why is some kind of hypothecation acceptable in this area when in so many other areas, it's said to be impossible or a really bad way to apply funds?

For example, there's been debate for a few decades about whether television licence fees should be applied to funding drama production, children's programmes or anything else. For a brief period there was, although the usual argument is that this money should not, under any circumstances, be ear-marked for the area from which it came but instead go into consolidated revenue.

This strengthens the point that, if different forms of taxes are extracted from telcos then they should go into consolidated revenue, and somebody should decide what was the social or economic need for areas to be subsidised. I'm not taking a position; rather I'm trying to put that argument.

Before we address the various costing issues Tony Shaw has raised, we should finish discussion on the local government model. Perhaps somebody can think of a better name for that, such as the Local Trust?

**DAVID HAVYATT:** The Active Citizen Model.

**ANDREW BRIGGS:** One of the few areas where regional service provision has gotten going is the concept that Bendigo Bank introduced, where the local community went into partnership with the bank, provided the capital

and provided a service that met a need that previously wasn't being met.

Now unfortunately telecommunications is a lot more complex than setting up a shop front and providing banking services. But the Bendigo Bank concept is one of the few that appears like it will work. Keep in mind that the local groups had to put up the money to make it happen.

**CHRIS DALTON:** How big is the problem? Have we talked enough about what it is we are trying to fix that demands the sort of solutions that we're considering?

It comes back to what role we want government to play: Is it to ensure the provision of a lowest common denominator level of service? To fix the barriers to entry? To be innovative in encouraging economic development? What in the current arrangements are so seriously deficient that the government has to intervene further?

It is premature to start looking at solutions before we really properly understood what it is we're trying to fix. Is the problem sufficiently big that it demands some radical action or major change by us? If we're saying that government – be it local, state or federal – must be involved, how then should we respond to a converging environment that might require continual adjustment?

Everyone in Australia now has access to un-timed local calls. This would have been an acceptable policy outcome 10 years ago. But now we could suggest new targets that might require a continuing role for government. Is that really what we want?

**DAVID HAVYATT:** I agree. The current process completely disconnects the person's problem we're trying to solve, from the person who solving the problem. It means that we are going to continually see the need for intervention, because there's something being created. What I'm suggesting is that we need the people with the problem to become more directly involved in working for the solution.

The bigger political issue is about how to address rural and remote problems in an ongoing way, rather than just trying to deal with the telecommunications problem. Otherwise we are just going to wind up in an endless process of forever thinking we've got to try to provide more and more and more, for a smaller and



smaller group of people who have no commitment to the outcome.

Rural and remote Australia is not homogenous. In many of these communities the people who have caused the communities their problems in the first place have been their own leading citizens. For example, it was the farmers who took their banking to the city, leading to a closure of regional banks.

**MARK ARMSTRONG:** Many of these communities are mining communities; they are in very remote places which look inaccessible, but in fact they are increasingly online to, say, Melbourne, Sydney or Perth. They also probably have a higher level of communications capacity than many people in metropolitan areas, because the mining companies compensate their employees for living in a difficult location by giving them everything they can electronically.

In that environment, a town that is essentially a one-company mining town is going to want a very different approach from the typical struggling bush town, which has just lost its bank and is in danger of losing its Base Hospital.

**JOHANNA PLANTE:** Chris Dalton and Tony Shaw are basically saying the same thing. What are the big issues we are trying to solve? What are the rural and remote communications services, apart from mobile coverage, that people out there want?

David Havyatt is addressing the issue of ways of not calculating the USO subsidy. This is his solution – it's not about getting better services to the rural and remote people. There's nothing wrong with that either. It's a solution to getting the government out of doing these USO subsidy assessments every year. But is it going to address the actual rural and remote communication problems that the individuals out there have, any better than the current situation?

Nor are we talking about mining towns; there are not that many and they are well looked after.

With regard to the models where companies get together with local governments or other groups to set up a commercial operation, at the last NtN funding round we knocked back almost all Building Additional Regional Networks (BARN) applications on the basis that the models were unlikely to be sustainable without ongoing subsidies.

**DAVID HAVYATT:** I fully support all those comments. I find the idea weird that you spend government money to fund people to build competing networks in these areas. It's the wrong way to get the citizens active.

**JOHANNA PLANTE:** Half the time it's those companies, not the citizens, that are the drivers. It may not be like the Bendigo Bank at all.

**CHRIS DALTON:** To rephrase what I said earlier, are we getting the best value out of around \$500 million in telecommunications subsidies that are being paid through the USO, NtN and other mechanisms? Are there better ways of getting results?

**MARK ARMSTRONG:** One option is whether the level of government that looks after rural telecommunications now should keep looking after it. A second is whether there should be a guarantee that everybody gets a certain level of service. How can we best address this, at least for the immediate future?

**PHIL CHYNOWETH:** We spoke earlier about Singapore. What they were after was not a standard telecommunications offering to the people, but an economic competitive advantage within the region and also the world.

So also, when we look at our markets and the people we serve, that's what the people are asking for. The businesses and people are looking for something different to make things better, as opposed to providing a common set of services.

Obviously you must have both, but within government policy we don't have anything about economic competitiveness and yet telecommunications infrastructure is central to this, whether you're out on the farm trying to be competitive or in a regional centres. That's what is lacking.

We did an interesting study. In Canberra we asked: 'Does anybody know what broadband means?' Seventy percent of businesses and residents didn't understand clearly what broadband was. While the greater majority of people are certain about what outcomes they want, they aren't really talking technology.

**IAN MCGARRITY:** The most useful definition that the Sydney conference on Broadband came up with was 'always on' and 'faster speed'. So if you asked: 'Would you like your

internet to be always on and at a fast speed?', I think you'd get a very significantly more informed response than if you asked: 'Do you want broadband?'.

**CHARLES BRITTON:** For me, broadband is a meaningless term. What I consider to be fast today may not be considered fast tomorrow.

**MARK ARMSTRONG:** Chris, as most of you know, is the person running SPAN's Broadband Xchange project, so this is all grist for his mill.

From the supply side, broadband is a very sensible thing to talk about. You're building networks with radically different capacity, and using different technologies to deliver them. Unconsciously, providers have slipped into transferring what they do into what they offer to the customer. For example, Telstra has transferred its internal arrangements and different business modules to how it faces the customer. Others do the same. They don't understand that there is another language for customers, where you talk about what you can do for them. Instead they use the language they're used to using when planning and building networks.

**PHIL CHYNOWETH:** As a result the major benefits are all assumed. With convergence and the emergence of related IT and network-based applications, it is very difficult to generalise about what those benefits are, because they're very specific to an industry or to a group or an application. This is the key issue.

We've got the capability of providing broadband, but availability is not the problem anymore. Instead we need to talk about the benefits that somebody will get out of it.

**CHARLES BRITTON:** Simplification is useful because 'better' and 'faster' are really good terms. But then it comes down to what you are being charged for, what you want to pay for it, and what your expectations were of what you were sold.

In this regard, 'unlimited' is not a good word to be used in a telecommunications marketing context, particularly in the context of faster speeds. Telstra has now, quite cleverly, segmented broadband speed and capacity. A potential trap for customers is that the faster the service, the more the customer can download data really quickly; but if a capacity limit is passed, then higher costs are incurred.

**DAVID HAVYATT:** This is about real costs. It is one of the errors of broadband to suggest that somehow, just because the pipe's fatter, you can get more data, without there being more costs elsewhere in the structure.

**CHARLES BRITTON:** I'm not saying it should be free, but people must have an absolutely clear understanding of what it is they're buying. The marketing messages need to be clearer. One of the big problems of broadband is that it does have this notion of a big pipe and free contents, while in fact not even the bit carriage is free.

**PHIL CHYNOWETH:** One of the big issues for broadband carriers is bad debt. This might be addressed in part by having a warning that shows you're getting close to your monthly limit.

**DAVID HAVYATT:** I'm told that that's one of the key features of Optus broadband.

**MARK ARMSTRONG:** Telstra has a sophisticated meter that can send you an email that says: '10 days into the month and you've used 80 percent of your download'.

**IAN MCGARRITY:** Are there peak, off-peak and shoulder rates?

**MARK ARMSTRONG:** No.

**IAN MCGARRITY:** So there's no efficient use of the network?

**ANDREW BRIGGS:** ADSL is a new product, so you can't expect the whole market to be in some sort of magical equilibrium from day one. There are still a lot of issues to be worked through. These sort of teasing problems are part and parcel of introducing a new product with different pricing paradigms.

**JOHANNA PLANTE:** Rural and remote areas can't get access to it anyway outside the towns.

**DAVID HAVYATT:** A problem in tendering for the Extended Zones project was that the existing network asset was not transferred. So, the model that we were considering included a transfer of the asset, and then a tender for the running of the asset. Perhaps we could also discuss some of the other options in the research paper, such as whether increasing subsidies to encourage competitive carriers would make a difference?

**MARK ARMSTRONG:** More tendering and increasing the subsidy are just two options in the research paper, which proposes a number of variations to the current system. What others are there?

**CHRIS DALTON:** The paper is centred on the question of what can be done to motivate carriers to do more in rural Australia, assuming there is a need to do more.

The first option focuses on contestability areas. If nobody has registered as a contestable carrier, *and* we think that is a deficiency, *and* we want to get somebody else registering as a contestable carrier, then consideration could be given to increasing the size of the subsidy. At some point Optus, or another carrier, might decide that it is better to register as a universal carrier in that area at a lower cost than subsidising Telstra's operation in that area. A variation within this, as outlined in the example in Appendix 5, depends on the relative contribution levels of a carrier like Optus, and a regional carrier. The subsidy would not need to be increased, once a commercial agreement was reached between those carriers about which one of them was registering as a USO operator.

The underlying premise is that the subsidy scheme can be used to stimulate behavioural responses by carriers. As it is an industry-funded scheme, the net cost to a carrier of an increase in the subsidy is measured in terms of the net change in the cost of subsidy payments and loss making activities.

**MARK ARMSTRONG:** What offer would you, as the ACA, make to carriers to get them interested?

**CHRIS DALTON:** If no carrier has registered to be a competing universal service carrier, then the ACA can announce that it will increase the subsidy level from, say, \$500 to \$600. After six months the ACA could increase the level by another \$100 if no carrier registers. This could continue until a carrier registers.

This puts information into the market about the cost of the USO scheme as a means of attracting a second carrier in the market. If the signal is put into the market place, that this subsidy is just going to increase until another carrier enters the market, then an objective market-based value of the universal service obligation in that area will be set.

**MARK ARMSTRONG:** How does this work for a potential competing carrier?

**CHRIS DALTON:** Suppose I am Optus, and in a contestable area I am effectively paying Telstra, through the USO levy fund, a \$200,000 USO subsidy. By entering that market as a competing carrier I still pay \$200,000 into the USO levy fund, I also incur a cost by entering the market, but I generate new revenue for myself, from my new USO customers and from reimbursement of some of my contribution to the USO levy fund.

So I do a calculation along the lines that my net cost in entering the market place is \$50,000, but the increase in my contribution to the USO levy fund is only \$25,000. At what point will the increase in USO levy fund contributions exceed the net cost of entering the market, thereby making it more attractive for me to enter the market?'

**JOHANNA PLANTE:** Would Telstra still be getting the subsidy?

**ANDREW BRIGGS:** Yes, and we'd get the increase.

**JOHANNA PLANTE:** So Telstra gets an increased amount for a customer, as does the new carrier. Basically, it is increasing the cost of service provision, with the benefit that there is a competitor in the area.

**CHRIS DALTON:** There's not an increase in the cost of service provision, as it is increasing the subsidy with the benefit that you have two players rather than one.

**ANDREW BRIGGS:** It would increase the cost of service provision to other customers, as the tax on them increases.

**CHRIS DALTON:** Look at the levy side. Telstra meets 80 percent of that levy. So when you increase the subsidy amount, Telstra incurs most of that cost. Telstra pays it to itself, so the actual real cost within the industry changes very marginally.

**JOHANNA PLANTE:** It's impossible.

**TONY SHAW:** It's totally wrong. If you increase the subsidy, then you're going to add this increment of subsidy on to the top of the USO levy. It doesn't matter who changes it, it's a real cost to the industry, and it gets passed on to

customers by shareholders. It is a real cost to the industry, whichever way you want to look at it.

**CHARLES BRITTON:** This raises issues about whether we are prepared to spend in order to buy the appearance of competition, and whether we are providing basic services, or additional services.

From a general consumer perspective it's important that rural and regional Australia are included. It's also expected that over time, a basic service would migrate up the chain. But whatever is at the very top of the service chain should not necessarily be provided.

So it depends whether you want to pay for the appearance of competition, when the basic service is being provided at a lower cost. It doesn't make sense from either a consumer or general common-sense perspective.

**ANDREW BRIGGS:** The model moves away from having to determine the cost through some type of administrative arrangement, to having the market determine it through bids for subsidies. The price or subsidy is arrived at by carriers bidding for subsidies based on providing particular services in particular areas. This is like an auction, and similar to what they did in the Extended Zones.

**CHRIS DALTON:** This is an important distinction. The subsidy becomes an incentive rather than a reimbursement for cost, where there's also an issue about whether the cost has been correctly estimated, or not.

It's also important to question why other carriers are not in the market place. One of the reasons may be because the subsidy isn't high enough to make it worthwhile for that second carrier to be in the market offering that universal service. If it is not high enough, there is nothing wrong in any respect with increasing that subsidy so that it more closely resembles what the cost is. Otherwise Telstra is subsidising the delivery of that service at a higher level than the other carriers. So this approach provides a market dynamic to test out whether the subsidy is at the right level or not.

On the issue of whether it raises overall costs within the industry, suppose the USO amount is one million dollars. Telstra contributes \$800,000 to this amount and the other carriers contribute \$200,000. If you raise the subsidy by 10 percent,

the overall increase is \$100,000; Telstra contributes \$80,000, and the other carriers will contribute \$20,000 of the increase. In this circumstance, the net increase in cost to the industry is \$20,000, not \$100,000.

**TONY SHAW:** It is a fact however that the net amount of the subsidy that needs to be shared amongst players goes up. It doesn't matter who pays it, it's still a cost on industry that will be borne by either users of networks or the owners of networks and services, one or the other. Someone's got to bear it.

The fundamental questions are: (i) do you want to pay to achieve competition? and (ii) will that competition provide a better quality and range of services at a reduced price? Then, if you're prepared to do it for contestable areas, the adjacent zone will want you to pay for competition there, too. In which case the whole of the subsidy level will rise, and you must ask yourself: 'What are the net benefits?' If they're not there, then don't do it.

**DAVID HAVYATT:** If the cost increases by 10 percent, then the subsidy payments by everyone increase by 10 percent. The fact that 80 percent of the subsidy is being paid by Telstra doesn't change that.

Of all the possible outcomes from the contestability pilots, the worst outcome would have been for too many people registering, as this would have indicated that the subsidy was set too high. Equally, if no one registered then this wouldn't mean that it is too low, for the range of reasons we've already mentioned. In other words, the contestability pilots are doing exactly what one would have hoped. The fact that no one has registered is not necessarily a matter for concern. If no one registers in another three years, then maybe you would question the process. Capital investment decisions are moderately long run and capital is needed to compete in this market. So we should not move rapidly to increase the subsidy.

**CHARLES BRITTON:** In part it is an economic theory issue – that the market will find the right price. But this assumes there are at least two Telstras out there. So what you're doing is finding the price needed to encourage new entrants, in other words, paying for the competition. If there were already new entrants out

there, or established players, it would be a different matter.

The market is not going to determine the cost of the USO; it's going to determine the cost of attracting new entrants. It is an investment issue. Rather than expecting the new entrant to make an investment and then recoup it, this model says: 'Let us make it for you'.

**IAN MCGARRITY:** I don't agree that the cost would rise for all the industry. If the subsidy is set too low and Telstra loses 'x' million dollars every year in meeting its universal service obligations, then that loss flows through Telstra's prices to other customers, and to its competitive position in the market place.

So by raising the subsidy you might be spreading Telstra's loss more fairly across the whole industry, in proportion to the revenue that they now earn. If, however, you are a big organisation like Telstra, then the cost to you of entering a marginal market place that the contestability areas are presumed to be, should be significantly lower than that for a new entrant. So raising the subsidy level to the point where others might enter the market may well go past recouping any losses that Telstra might be make. While the suggested model is intellectually interesting, it puts a further layer of sophistication on something that's already not all that perfect and probably takes it just that little bit further away from reality.

**PHIL CHYNOWETH:** It could be a pretty blunt instrument. A subsidy approach is a lazy way that won't necessarily create a sustainable business model in the long term.

**CHRIS DALTON:** The basic question still remains: 'Do you want to attract another carrier into the contestable areas?' It is by no means certain that the answer is: 'Yes'. It might be sufficient just to have that scheme there. What the paper proposes is based on the premise that you have already reached the conclusion that it is desirable to attract competition.

A second point is that the approach is much more economically justifiably if the subsidy is set at a level that is below cost. Once the subsidy exceeds the cost, then undesirable market distortions may occur.

A key question is: 'What is the actual gain?' Is the extra cost of implementing a sophisticated,

elaborate approach merited on the basis of the benefit it will achieve in the long term by introducing competition?

**MARK ARMSTRONG:** What about the second option you raised?

**CHRIS DALTON:** The second option relates to the Extended Zones approach. As discussed earlier, just as a neighbouring area to a contestability pilot area might seek a contestability solution, so also a neighbouring area to the Extended Zones might seek an Extended Zones solution.

The Extended Zones initiative is clever policy. Telstra is now committed to provide untimed local calls in those areas on a commercial basis, although there is no guarantee that Telstra will retain 100 percent of USO subsidies in those areas after the first three years. It has also set a benchmark on subsidy levels in those areas, as Telstra has made a commercial judgement that it is in its shareholders' interests for it to commit to provide these services at the nominated subsidy levels. Further, it is offering a higher level of service than it would have provided under the former compliance regime.

In other words, Telstra can no longer argue that the subsidy levels are too low, since it has determined, on commercial grounds, that they are sufficiently high to justify Telstra entering into a contractual commitment to be the unique universal service provider in those areas.

The Extended Zones approach is a first step in a transition to an incentives approach away from a compliance approach. Can it now be applied to the next ring around the Extended Zones?

In passing, it is also interesting to note that the outcome provides a useful benchmark for the size of the USO subsidy in other areas, which must be lower than the level that has been accepted by the market for the Extended Zones, which are the most remote, lowest population density areas in Australia.

**MARK ARMSTRONG:** What would you tender for?

**CHRIS DALTON:** You could tender to be the exclusive USO provider.

**DAVID HAVYATT:** What is the dynamic in the tender process? It's an artificial auction because no one can compete with Telstra in such an auction, given the extent of Telstra's current

employed asset. This was a stumbling block in the Extended Zones tender. So the problem to be addressed is how to construct a viable tender process where only one carrier has an existing network.

**IAN MCGARRITY:** It is essentially a political process to determine what services a particular segment of the population should have. A government can decide that, for legitimate reasons, particular communities are systematically experiencing a communications disadvantage and that action should be taken politically to redress this.

Once this judgement has been made, then the use of tenders is a sensible marketplace mechanism to use. One of the greatest difficulties, however, would be how much effort Telstra's competitors will put in, given Telstra's success in the Extended Zones.

**CHRIS DALTON:** I don't disagree with what either David Havyatt or Ian McGarrity has said. But if no new schemes are introduced, are we going to engage in another debate in three years time about the level of the USO in these other zones? I suspect few people would want to enter into another two to three year debate on estimating USO subsidy levels. Conversely, if there is not going to be further debate about the level of USO subsidy, then maybe we don't have to do anything.

Further to this, if the government wants to increase the scope of the standard telephone service, then tendering is a way to proceed. This raises the question of the extent to which the government should be pro-active about ubiquitous access to higher service levels, and how much it should let the marketplace decide what those new levels of minimum service should be.

So if you're happy with the status quo, there's going to be no further debate amongst carriers about subsidy levels, and there's going to be no further debate about increasing the access rights of citizens to telecommunication services, and no further change is needed. But if this is not the case, what should the response be?

**MARK ARMSTRONG:** To put it another way, if you don't take up those options, what do you do about the USO scheme? Does it continue on in its current form forever?

**CHRIS DALTON:** Another issue raised by the research paper is that of maximising the use of the USO subsidies, the NtN grants and other communications-related grants, such as for broadcasting services. For instance, how does the Government secure the most effective use of over \$500 million per annum in rural communications subsidies?

If there is only going to be one carrier in an area, then what are the funding solutions that will deliver maximum effectiveness and use of that money across a converging communications industry? Do you confine the reforms to telecommunications and USO matters alone, or do you broaden them in some way and, say, allow only USO carriers to have the right of access to other communications-sector grants?

**CHARLES BRITTON:** To return for a moment to the question of whether the USO will persist, in my opinion it will. There is nothing in the discussion today to suggest that there has been any real systematic diminution in the disadvantages that regional Australia experiences.

There's a real struggle even to get competition, let alone for competition to have a significant effect. Nor is technology the solution. Technology changes both more quickly and more slowly than you expect.

So it's not possible to predict that the USO will be unnecessary in a couple of years as a result of the advent of 'x' technology. Rather, the USO is with us, at least for the medium term, for a decade or more.

**JOHANNA PLANTE:** I agree. There is nothing in the cost structures of any of the new technologies or in competition that will change the need for subsidies. The only thing that could change is if the Government were to commit to a policy of broadband for everybody.

**MARK ARMSTRONG:** How do you secure long term growth through investment of this \$500 million? An economically correct argument might conclude that none of these short-term initiatives should be undertaken. From a political perspective, however, should the revenue from the next tranche of Telstra go towards improving uneconomic rural roads and other politically attractive initiatives, but which don't increase Australia's competitiveness; or towards investment in rural telecommunications that will promote growth in the longer term?

**DAVID HAVYATT:** I doubt that any spending on rural telecommunications improves Australia's competitiveness. I suspect that it improves our competitiveness in the services industry, not the agricultural industries.

**IAN MCGARRITY:** The bulk of the rural economy is not in agriculture, but in provincial towns.

**DAVID HAVYATT:** No one in the provincial towns is being paid the USO subsidy. So this telecommunications spending is not going to grow the economy.

**PHIL CHYNOWETH:** Most properties do use the internet for access to weather forecasts and for tools to assist crop plantation, for example. This is part of the reason why they've been so efficient. The use of data and information is a very key for achieving efficiency in the rural industry. Good communications is also just as important for exports and our resources industry.

**MARK ARMSTRONG:** An alternative way to spend this \$500 million is based on a town planning argument – that it's a lot better to use rural infrastructure to deliver services from a wide range of locations rather than from Melbourne or Sydney. This could deliver savings on education by offering higher level, higher quality education to people who are in remote areas.

**TONY SHAW:** This is a very important point. In this regard we need to remember that there is already provision that everyone in Australia can get access, at a price, to a 64 kbps data service. So if any farmer wants access, it's already there if they want to pay for it. The difficulty is that people usually don't want to pay the price. They want an improved service, but at the same price they have now.

**CHARLES BRITTON:** Sustainability is very important for rural telecommunications. I would hope that the initiatives covered by 'listing costs' include investments that address sustainability issues.

Another key macro-economic notion concerns the concentration of skills in metropolitan regions. People migrate to denser markets to exercise their specialisations. That's why top range businesses go to New York and why a general practitioner in Orange comes to Sydney to be a specialist. This is a fundamental dynamic in a market economy.

So regional Australia's problem is not just a technological one relating to distance and population density. It also arises as a consequence of economic and geographic factors that are independent of telecommunications services. Any rural telecommunications solutions must also take into account these factors.

**DAVID HAVYATT:** I agree. This is why we need to have a conversation about regional and remote Australia in general, rather than regional and remote Australian telecommunications in particular. Maybe the Whitlam Government had certain aspects of rural and remote Australian policy right, in terms of regional development centres.

We also need intervention strategies that focus on demand-side factors. We should work with an industry that has a well-defined need and then seek solutions from the supply side. We have a tendency, however, to work on the supply-side of this problem, with the approach 'build it and they will come'. What happens is that we built it and they don't come. Any money spent should be spent on the demand side, not the supply side.

**MARK ARMSTRONG:** Demand aggregation schemes are excellent in theory, but extremely difficult in practice.

**DAVID HAVYATT:** I'm not only suggesting demand aggregation. We must also work with the people who will benefit from our services, so that they see the benefit and are prepared to make the expenditure.

**JOHANNA PLANTE:** I support that, as I would be the first to encourage an open, balanced assessment of the effectiveness of the \$250 million NtN fund. But having said that, given that \$250 million doesn't buy much telecommunications infrastructure, and that the allocation of funds was in response to community requests, most projects were initiated from the demand side. The exception was mobile phone coverage, which has been a success in its own right.

So NtN has been primarily driven by the demand side, in funding telecentres, training programs and portals for the tourist industry. It has not had a purely technical infrastructure focus.

**MARK ARMSTRONG:** Moving on from this, how would an access regime address some of these rural issues? Are they different, or more

difficult to implement in rural areas than in the CBDs or residential areas with the local loop? Is it the same issue or are there some differences?

**DAVID HAVYATT:** There is a failure of the access regime because that regime is geared towards facilities-based competition, and we're examining markets where the teledensity is by definition much lower and the economic viability of having duplicate infrastructure is lower. The same access regime applied to both markets doesn't deliver the right kind of consequences.

For example, there is no way an access regime applied to mobile networks will ever mandate domestic roaming, as ATUG continues to demand. It is not logical for metropolitan areas. This is not the case, however, once you get past a certain boundary line in rural and remote Australia.

While it might be possible to use the competitive dynamic created by people who own infrastructure in the cities to agree to use a common infrastructure in the regions, the access regime prevents this happening. This is due to a national markets focus and the need for the access regime to be triggered by an access seeker.

The answer to it is not necessarily in the access regime but in other processes, such as concessional tax arrangements or incentives for shared infrastructure investments. Nothing in the current access regime will allow the needs of a regional market to bubble to the surface, as all access decisions are made on the basis of what is happening in the metropolitan markets.

**MARK ARMSTRONG:** What is stopping more rational sharing of the facilities in regional areas?

**CHRIS DALTON:** There should be a policy that if public funds were used to build infrastructure, then the recipient should provide access to allow the other carriers to share that infrastructure.

**DAVID HAVYATT:** The problem is two-fold. First, the access process didn't work well until recently. But the real failure was a lack of common, shared base stations, particularly those at the networks' extremities, where one base station could easily handle the traffic volumes of all three operators, not just one.

**JOHANNA PLANTE:** These grants were allocated on a tender basis, and where at most only

50 percent of the capital cost was provided. So the carriers that lodged tenders had to assess their traffic loads, their operating costs and their capital costs and then decide whether to proceed. If after that you change the rules and require a traffic sharing arrangement with two other operators, it may no longer be a viable business proposition.

**DAVID HAVYATT:** Open access only increases the traffic, it never takes away the traffic, so I don't know why sharing does not happen. It may principally be because it is not in the minds of the decision makers, and there is no-one forcing them to address the issue in a logical way. For example, the facilities access regime was only unblocked when Senator Campbell forced the issue with the carriers.

**MARK ARMSTRONG:** Is there any difference between this and access under Part XIC of the Trade Practices Act?

**DAVID HAVYATT:** A classic example is the debate between declaring the unbundled local loop and declaring a wholesale DSL service.

In regional Australia, where it makes no sense to duplicate infrastructure, declaring the wholesale DSL service may be the solution. In metropolitan Australia, where facilities-based competition right to the local exchange is more viable, declaring the unbundled local loop may be preferable. But we end up having to declare a wholesale ADSL service everywhere, or to declare the unbundled local loop everywhere. Whereas the solution required in each market is different. The access regime is a blunt instrument.

**IAN MCGARRITY:** I'm concerned to hear that the access regime for sites and towers is flawed. In looking at the same issue with broadcasting sites and towers, I was referred to the telecommunications access regime. I understood, however, that Crown Castle has now bought both Optus and Vodafone towers and so would be wanting to promote a shared facilities strategy, for good commercial reasons.

With regard to broadcasters' site sharing experiences, the *Broadcasting Services Act* describes broadcasting sites and towers as a network but they are not a network at all. Each one of them is a separate entity unto itself.

There has not been any worthwhile effort in that marketplace to introduce good quality access



decisions. For instance, you could get access for a tower at Mount Sugarloaf near Newcastle, but that won't necessarily assist you to get access to a tower in Rockhampton.

The experience in the telecommunications access regime was also used as the reason why certain aspects of telecommunications access regimes in respect to digital television were removed from the National Transmission Network Act.

I am very concerned about the cost of infrastructure roll out, whether for 3G, for digital television or for digital radio, when it comes. I wonder whether there might be some policy innovation that might bring together the infrastructure that is being built for these wireless and fixed line services?

In addition to the \$500 million in rural telecommunications subsidies mentioned in the research paper, the Government is allocating about \$60 million for the Television Black Spots Program, and regional television operators will also get \$250 million to assist them to roll out digital services. There have also been sales tax concessions and licence fee rebates. Could the funds allocated for rolling out digital television in rural Australia be used in a consolidated way with USO and other telecommunications subsidies to facilitate broadband internet access?



# PART III – Research paper

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by Chris Dalton

## 1. Introduction

Regional, rural and remote telecommunications services have attracted growing consumer, commercial and political attention since the announcement in 1988 of a program of micro-economic reform in telecommunications.<sup>1</sup> This paper provides an overview of related regulatory and political events during this fifteen-year period, and proposes a conceptual framework against which they can be analysed and new rural telecommunications initiatives can be developed.

### Box 1: Telecommunications in Australia

#### **Australia-wide<sup>2</sup>**

7.5 million residential lines in 2000

\$9,000 million infrastructure investment in 2000/01

\$19,000 million total telecommunications services revenue in 2000

13 per cent annual revenue growth 1997 – 2000

#### **Rural Australia<sup>3</sup>**

0.4 million loss-making residential lines in 1998/99

\$545 million in revenue received by Telstra in 1998/99 from those services

\$280 million in net losses incurred by Telstra in 1998/99 on those services

Throughout this paper, the term ‘rural’ is used in a generic way to encompass all those parts of Australia where a telecommunications carrier could provide basic telecommunications services only at a loss.

Rural telecommunications services grew in importance during the term of the second Howard Ministry (1998 – 2001), attracting a high level of political attention, although only constituting less than 5 per cent of the Australian telecommunications market (see Box 1).

This activity matched the electoral significance of the rural sector. First, the Coalition government’s majority in the House of Representatives depended on the outcome of elections in a number of marginal rural electorates. Second, the rural sector had the electoral capacity to reduce the Coalition’s representation in the Senate, thereby further constraining the exercise of power by a Coalition government. It was also stimulated by factors specific to the rural sector:

- an economic decline in the rural sector in the 1990s;
- strong linkages between the National Party and rural Australia;
- the electoral threat posed by One Nation to the National Party;
- the Coalition’s agenda for privatising Telstra; and
- increased demand for access to better telecommunications services.

What has not received attention is the extent to which this increase in government activity contributed to a widening gap between the telecommunications services that rural consumers wanted and the services that were supplied to them.

There is very little academic analysis of rural telecommunications issues in Australia. Debate has rarely gone beyond commentary on poor carrier performance, Telstra privatisation issues and predictable calls for government intervention in the form of more funding initiatives and enhanced compliance measures.

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<sup>1</sup> Senator Evans, ‘*Australian Telecommunications Services: A New Framework*’, Statement by the Minister for Transport and Communications, Australian Government Publishing Service (AGPS), Canberra, 1988

<sup>2</sup> Productivity Commission, ‘*Telecommunications Competition Regulation, Report No 16*’, AusInfo, <http://www.pc.gov.au/inquiry/telecommunications/finalreport/index.html> Canberra, 2001, Ch 3

<sup>3</sup> Australian Communications Authority (ACA), ‘*Estimate of the Net Universal Service Costs for 1998/99 and 1999/2000*’, AGPS [http://www.aca.gov.au/consumer/uso/NUSC\\_Est1998-2000.pdf](http://www.aca.gov.au/consumer/uso/NUSC_Est1998-2000.pdf), January 2000

This paper first reviews the achievements of the micro-economic reform program. It then suggests options for a new approach that is more responsive to an industry where both the demand and the supply sides are changing very rapidly. It finishes with some proposals that set new targets for telecommunications, reduce unnecessary service duplication, improve cost-efficiencies and capitalise on market forces. These proposals exploit carrier funding of Universal Service Obligation<sup>4</sup> (USO) losses, commercial leverage derived from the high level of rural telecommunications subsidies, and the converging nature of telecommunications. The overall point is that continued use of a strategy that is 'more of the same' will lead to a widening of the digital divide that exists between metropolitan and rural Australia. Greater exploitation of the factors influencing carrier behaviour is suggested, given the growing commercial attractiveness to carriers of the rural telecommunications market.

## 2. Background

Under the Constitution of Australia, the provision of telecommunications services is primarily a federal responsibility.<sup>5</sup> Originally the Commonwealth exercised this responsibility through the Postmaster-General, a government minister, and the Postmaster-General's Department. For brevity, the minister and department are referred to as 'the PMG' below. Since 1901, as indicated in Box 2, many players have been influential in shaping the development of rural telecommunications policy.

With the commencement of the *Telecommunications Act 1975*, responsibility for the delivery of domestic telecommunications services was transferred from the PMG to the Australian Telecommunications Commission (Telecom Australia), a new statutory authority operating at arm's length from government. Telecom Australia inherited the management, personnel, work practices, business systems, customers and infrastructure from the PMG. Australia's inter-

national telecommunications services, however, remained the responsibility of the publicly owned Overseas Telecommunications Commission (OTC).<sup>6</sup>

In 1988 the Minister for Transport and Communications announced a program of micro-economic reform to put the delivery of telecommunications services in Australia on a more commercial footing. Telecom Australia was restructured to become a business corporation and in 1991 it was merged with OTC to form a vertically integrated provider to Australian consumers of domestic and international telecommunications services. It was subsequently renamed Telstra, competing with Optus and Vodafone, two new privately-owned carriers. Later, the *Telecommunications Act 1997* became the primary statute governing the delivery of telecommunications services. The universal service regime in that Act then became the subject of the *Telecommunications (Consumer Protection and Services Standards) Act 1999*. The main object of the regime, stated in the 1999 Act, is:

to ensure that all people in Australia, wherever they reside or carry on business, should have reasonable access, on an equitable basis, to:

- (a) standard telephone services; and
- (b) payphones; and
- (c) prescribed carriage services; and
- (d) digital data services.<sup>7</sup>

Inherent in this statement of consumer rights are the concepts of equity, reasonable access and minimum service. Equity is a word frequently used in the USO context, where its meaning is limited to covering equitable access rights. The core USO principle is that wherever someone is in Australia, they have equal right of access to a defined basic suite of services, at or above a minimum quality standard; and at or below a defined price. There is little disagreement about this principle that a consumer's telecommunications rights should be independent of location.

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<sup>4</sup> The term *Community Service Obligation* is also used. More recently Universal Service Obligation has become the more commonly accepted term in Australia and so for consistency is used throughout this paper.

<sup>5</sup> Section 51(v) of the Constitution gives the federal government power to pass laws for 'postal, telegraphic, telephonic and other like services'.

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<sup>6</sup> OTC was established as the body responsible for Australia's overseas telecommunications in 1946 under the *Overseas Telecommunications Act 1946*.

<sup>7</sup> Section 4, Part 1, *Telecommunications (Consumer Protection and Service Standards) Act 1999*.

There is much debate, however, about the definitions of reasonable access and minimum service, which in turn raise issues such as affordability, service range, service quality, pricing and customer choice. The suitability of the measures implemented to ensure that these minimum standards are achieved, although important, has attracted less attention.

## Box 2: The Players

The Minister	Federal Minister for Communications, Information Technology and the Arts. <sup>1</sup>
The Department	Federal Department of Communications, Information Technology and the Arts (DCITA) advising the Minister on portfolio matters
The ACA	The Australian Communications Authority, the telecommunications industry regulator responsible for managing universal service arrangements and associated inter-carrier payment arrangements
NtN Board	The Networking the Nation Board, responsible for managing the \$250 million program established by the Government to assist the economic and social development of regional, rural and remote Australia by funding specific telecommunications projects
Besley Inquiry	Established by the Howard Government in March 2000 to assess and certify the adequacy of telecommunications services in Australia (a pre-requisite to any further sale of Telstra shares)
Telstra	As Australia's primary universal service provider, Telstra has the statutory obligation to supply the standard telephone service to anyone in Australia, wherever they reside or carry on their business, on an equitable and affordable basis
Competing carriers	AAPT, Hutchison, Optus, Vodafone, etc, which, with Telstra, fund the losses incurred by Telstra in meeting its universal service obligations, and can register as competing universal service providers in USO contestability areas
Bellcore International	Company engaged by the ACA, Telstra, Optus and Vodafone to build a cost-proxy model to estimate the size of the losses incurred by Telstra in meeting its universal service obligations
STSRG	The Standard Telephone Service Review Group, a working party appointed by the Minister to determine whether a change in the level of service mandated under USO legislation was required
BTCE	The federal Bureau of Transport and Communications Economics, an economic research group that produced the original estimate of the losses incurred by Telstra in meeting its universal service obligations

The focus here is on which regulatory measures are necessary to ensure that minimum consumer rights are met. This also requires some consideration of minimum service matters, as there is a dynamic relationship between the two. A more cost-effective service delivery methodology should lead to improved consumer benefits, and hence to less reliance on a prescriptive regulatory solution. It is not the aim of this paper, however, to examine whether consumers' telecommunications rights are adequately defined in legislation, beyond commenting on how alternative strategies might deliver more than statutory minimum service levels.

### 3. Origins (1901 – 1991)

Before 1991, the delivery of rural telecommunications services was based on the principles of monopoly, prescription, compliance and cost subsidisation:

- an assumption of natural monopoly conditions surrounding the provision of rural telecommunications services;
- prescription of the minimum level of telecommunications services that should be accessible to all Australians on an equitable basis;
- compliance with regulated prices to ensure that these prescribed services would be delivered on an affordable basis; and
- existence of subsidies (carrier-, rather than budget-,<sup>8</sup> funded) to cover losses incurred in delivering prescribed services at regulated prices.

The term 'natural monopoly' is used in a generic way, to cover a market where it is uneconomic for there to be more than one service provider. In this instance it is applied to the supply of services in the rural telecommunications market, where it is assumed that costs would be too high, and revenue too low, to support competing telecommunications carriers.

There was no competition in the provision of telecommunications services in Australia from Federation to 1991. Even as late as 1982, no action was taken to implement the findings of the Davidson Inquiry that there should be competition in the resale of telecommunications capacity

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<sup>8</sup> References to the budget are references to the Federal Budget.

and installation of private networks.<sup>9</sup> Without the benefit of competition to motivate the PMG to achieve service improvements and cost-efficiencies, the government used two principal tools to secure improvements in rural telecommunications services: service prescription enforced by statute; and direct control over the PMG as a federal department of state. This dual approach stimulated the roll-out of telecommunications infrastructure and services across Australia, but not necessarily in an optimal way. The PMG had few external incentives to improve cost-effectiveness and the government required management decisions to meet political, rather than operational and efficiency, goals. The PMG provided a convenient channel through which political objectives – such as job creation and improved services – could be achieved in rural electorates. As Ann Moyal said in her book *Clear Across Australia*:

There were clearly rural votes in communications and in the spreading telephone and television lines, a point recognised in the appointment from the late 1920s of Postmasters-General drawn from the Country Party and often from the Upper House.<sup>10</sup>

The restructuring of the PMG from a federal department into a federal commission (Telecom Australia) did little to change this. There were still no competitive forces to pressure Telecom Australia to deliver services to rural Australia in a more cost-effective manner, to reduce tariffs, or to introduce new services; while the potential for political intervention remained. Rural telecommunications was not a contentious policy area for government to manage. Provided it could satisfactorily balance minimum service levels (including prices, as regulated through price controls) against the size of the annual dividend Telecom Australia paid to the Commonwealth, there was little political incentive for change. This started to change with the announcement in 1988 of a program of micro-economic reform in telecommunications.

Box 3 provides an overview of initiatives that have occurred since then. Box 4 provides a

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<sup>9</sup> Communications Law Centre, 'Australian Telecommunications Regulation – The CLC Guide', Communications Law Centre, Sydney, November 1997, Ch 1

[http://www.comslaw.org.au/research/Telecommunications/19971120\\_clcguide.html](http://www.comslaw.org.au/research/Telecommunications/19971120_clcguide.html)

<sup>10</sup> A. Moyal, *Clear Across Australia: A History of Telecommunications*, Nelson, Melbourne, 1984, p. 205

summary of the key components of the USO arrangements introduced in 1991.

## 4. The reform agenda

With the introduction of competition in 1991, changes were made to ensure that Telecom Australia experienced no commercial disadvantage as a result of retaining statutory universal service obligations. This proved to be a complex matter.

### Box 3: Chronology

1988	Statement by the Minister for Transport and Communications on a framework for reform in the telecommunications industry
1989	BTCE Report on USO costs
<i>Telecommunications Act 1991</i>	
1992	Optus commenced service provision Vodafone commenced service provision Dispute about the size of Telstra's USO claim
1996	Bellcore International engaged to build USO cost proxy model Review of Standard Telephone Service Regional Telecommunications Infrastructure Fund, later renamed Networking the Nation, established (\$250 million)
<i>Telecommunications Act 1997</i>	
1998	Customer Service Guarantee introduced ACA Digital Data Review Telstra required to make an ISDN-equivalent service available to 96 per cent of the population Additional funding allocated to Networking the Nation (\$60 million) Telstra lodges \$1.8 billion USO claim

	Price caps reviewed
1999	Networking the Nation funding increased again (\$171 million) <i>Telecommunications (Consumer Protection and Services Standards Act) 1999</i>
2000	Customer Service Guarantee requirements strengthened Telecommunications Service Inquiry (Besley)
2001	Further funding allocated for rural telecommunications development initiatives (\$161 million) Price caps again reviewed \$25 million contract awarded to Vodafone to increase mobile phone coverage on rural highways \$150 million contract awarded to Telstra to provide untimed calls in Extended Zones USO Contestability Pilots commenced ACA commenced review of Customer Service Guarantee

### 4.1 The 1991 Act

Many elements of the pre-1991 arrangements were carried across to the *Telecommunications Act 1991* and some new provisions were added:

- in the short term Telecom Australia (subsequently renamed Telstra) remained the carrier responsible for provision of affordable access to basic telecommunications services across Australia, on much the same basis as before;
- the USO arrangements included only the standard telephone service (basic voice), payphones, emergency services, telephone interpreter services, and certain concessions to organisations for people with disabilities;
- price cap arrangements were introduced;
- there was provision for competition in the delivery of USO services in the longer term; and

- the USO loss incurred by Telstra on the standard telephone service and emergency services became industry-funded, based on a carrier's share of total telecommunications revenue in Australia.

### Box 4: Standard Universal Service Obligation arrangements

Telstra is the only carrier with the legal obligation to provide the standard telephone service (basic voice) on demand to any customer in Australia, in accordance with regulated prices.

The existence of price controls gives rise to the potential for a loss to be incurred in the delivery of USO services. Without price controls, a USO provider has the freedom to charge commercial rates that will enable acceptable rate of return targets to be achieved in meeting universal service obligations, and so to avoid any losses.

The Bellcore model is used to estimate the losses incurred by Telstra in meeting this obligation.

All licensed carriers contribute to the cost of reimbursing Telstra's losses, on a pro-rata basis that reflects their share of the total telecommunications market revenue in Australia.

The ACA estimated that Telstra's USO losses for 1999/2000 were \$281 million. Telstra funded 76.6 per cent of this cost, Optus 14.4 per cent, Vodafone 4.3 per cent, AAPT 1.7 per cent and the remaining carriers 3.0 per cent.<sup>11</sup>

The decision that the losses incurred by Telstra in meeting its universal service obligations would be shared among the telecommunications carriers brought with it the seeds of significant change that later developed into a major source of dispute between carriers. The rationale for this decision was that Telstra could be commercially disadvantaged, compared to its new competitors, if it had to meet and fully fund its universal service obligations, and that some form of

corrective intervention was necessary in order to achieve commercial equity.

An important input to the new arrangements was a report in 1989 by the then Bureau of Transport and Communications Economics (BTCE) that estimated the size of the loss to be between \$240 million and \$295 million.<sup>12</sup> This was the first attempt to cost telecommunications service delivery in Australia. In quantifying the loss, however, the report identified further complexities. For example, the BTCE advocated an avoidable cost approach, while Telstra argued for a fully distributed cost approach and estimated the amount to be \$640 million.<sup>13</sup> In addition, the report showed that the opportunity cost of capital had a significant impact on the size of the estimated loss.

The government accepted the BTCE's methodology and instructed Telecom Australia to use the avoidable cost approach for its future policy, strategies and costings for the USO.<sup>14</sup> Determining the size of the loss, and who should fund it, thus entailed judgements about financial and commercial aspects of telecommunications service delivery. A dispute arose between Telstra and its two competitors (Optus and Vodafone) about the size of Telstra's 1993/94 USO claim. Following negotiations between the carriers, the USO amount for that year was agreed to be \$230 million and the Australian Telecommunications Authority was asked to recommend a more acceptable costing model than that developed by the BTCE in 1989. As a result, Bellcore International was engaged in 1996 to build a fully documented and operational USO cost-proxy model, upon which future USO claims could be based. An overview of the costing of the USO is Appendix 1.

The die was cast, however, for reforms to the USO arrangements specified in the 1991 Act. Not only were the new telecommunications carriers becoming more involved in the USO debate, but there was also growing dissatisfaction about the supply of telecommunications services in rural Australia.

<sup>11</sup> Universal Service Assessment 1999-2000, ACA, 28 March 2001, [http://www.aca.gov.au/consumer/uso/1999-2000assessment\\_report.pdf](http://www.aca.gov.au/consumer/uso/1999-2000assessment_report.pdf)

<sup>12</sup> BTCE, 'Report No 64: The Cost of Telecom's Community Service Obligations', AGPS, Canberra, 1989, p84.

<sup>13</sup> Communications Law Centre, November 1997, Ch. 4

<sup>14</sup> Communications Law Centre, November 1997, Ch 4



## 4.2 The 1997 Act

Following a change in government after the 1996 election, the new Minister for Communications and the Arts, Senator Alston, established the Standard Telephone Service Review Group (STSRG)<sup>15</sup> with the objective:

to determine whether recent and emerging developments in telecommunications technology, or increasing demand for more advanced telecommunications services in the Australian community warrant a change in the level of service mandated under the universal service obligation.<sup>16</sup>

This review, chaired by Jock Given of the Communications Law Centre, and with representatives from academia, consumer groups and carriers, focused on whether minimum service levels should be upgraded. A contentious recommendation was that a digital data capability should be provided through the USO mechanism in the event that market forces failed to make this capability reasonably accessible to all Australians on an equitable basis. One member of the review group (Professor Henry Ergas) lodged a minority report which expressed the view that the main report ‘greatly over-states the likely benefits of prescription (of a digital data capability), while even more greatly under-stating its costs’.<sup>17</sup>

The report did not, however, question assumptions about natural monopoly conditions, the need for price controls or basic funding arrangements. While the STSRG advocated primary reliance on market forces to deliver improvements in mobile and digital data services, and supported opening up the USO to competition, there was little discussion or evaluation of whether market conditions had changed sufficiently to merit greater reliance on competition for the supply of the standard telephone service.<sup>18</sup>

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<sup>15</sup> ‘Standard Telephone Service to be reviewed’, Ministerial media release, 7 July 1996. This and all subsequent media releases referred to as ‘Ministerial media release’ are releases of the Minister for Communications, Information Technology and the Arts and are available at [www.dcita.gov.au](http://www.dcita.gov.au).

<sup>16</sup> STSRG terms of reference.

<sup>17</sup> Standard Telephone Service Review Group, ‘Review of the Standard Telephone Service’, Department of Communications and the Arts, Canberra, December 1996. See also Appendix 2

<sup>18</sup> Standard Telephone Service Review Group, December 1996.

While the STSRG report was being finalised, the Minister announced a new \$250 million rural telecommunications initiative – the Regional Telecommunications Infrastructure Fund (RTIF) – which was completely independent of USO arrangements.<sup>19</sup> This gave de-facto recognition that sole reliance on USO arrangements would not secure desired improvements in rural telecommunications services. In addition, the RTIF scheme provided for its funds to be allocated through competitive tendering processes, thereby promoting the prospect of a new carrier entering the rural telecommunications market and competing against Telstra. This was a significant precedent that challenged the previously accepted natural monopoly assumption.

Nevertheless, the *Telecommunications Act 1997* contained no major reforms to existing universal service arrangements. Its focus, instead, was on introducing a new industry-specific trade practices regime and removing limits on the number of telecommunications carriers that could operate in Australia.

## 4.3 The 1999 Act

A watershed came in September 1998 when Telstra lodged a \$1.8 billion USO claim. This was a 700 per cent increase on the amount previously agreed between the carriers, with a corresponding increase in the contributions made by the other carriers to cover Telstra’s USO losses. The validity of the claim was strongly contested by these carriers. In parallel with this, and with an increasing perception of a digital divide existing between metropolitan and rural Australia, the government continued to pursue a rural telecommunications strategy based on compliance, prescription and cost subsidisation. Commencing in November 1997 it:

- introduced a Customer Service Guarantee (CSG) requiring carriers to meet specified performance standards;<sup>20</sup>
- directed the Australian Communications Authority (ACA) to conduct an inquiry specifically into whether the USO should be upgraded to include a digital data capa-

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<sup>19</sup> ‘Government Announces Regional Telecommunications Infrastructure Fund’, Ministerial media release, 5 December 1996.

<sup>20</sup> ‘Customer Service Guarantee’, Ministerial media release, 10 November 1997.

- bility<sup>21</sup> (an overview of including a digital data capability in the USO is Appendix 2);
- allocated a further \$60 million to the Networking the Nation (NtN) program (previously called the RTIF program),<sup>22</sup> with an additional \$171 million being added in December 1999<sup>23</sup> (an overview of the NtN program is Appendix 3);
  - retained price cap regulation;<sup>24</sup>
  - capped the USO amount; and<sup>25</sup>
  - placed a Digital Data Service Obligation (DDSO) on Telstra, requiring it to make available an Integrated Services Digital Network (ISDN) service, on demand, to 96 per cent of the population, and included in USO arrangements a rebate of up to 50 per cent (maximum \$765 per service) of the cost of the equipment needed to enable the remaining 4 per cent of the population to obtain access to an asynchronous satellite digital data service – a Special Digital Data Service Obligation (SDDSO).<sup>26</sup>

In addition, there was a separate Act specifically addressing universal service matters, the *Telecommunications (Consumer Protection and Services Standards) Act 1999*. These initiatives failed to stem the mounting level of consumer concern about poor rural telecommunications services and the fear that service performance would deteriorate even more following the proposed sale of the final tranche of Telstra shares. What had started out as a relatively straightforward policy area had become a political minefield, with developments requiring sensitive and deft handling.

### 4.4 Further initiatives

By the end of 1999, the micro-economic reform program had failed to satisfy the rural community. It had also resulted in a greater engage-

ment by government in the detail of rural telecommunications services than had previously occurred. The plans for further privatisation of Telstra were a particular focus of concern, with the fear that this would lead to a deterioration in rural telecommunications services. Compounding this fear were increasing anecdotal accounts of a 'digital divide' between metropolitan and rural Australia, fuelled by incidents (such as the closure of the analogue Advanced Mobile Phone Service (AMPS) system at the end of 2000) which were seen to disadvantage rural consumers.<sup>27</sup>

#### Box 5: USO contestability arrangements

The USO contestability arrangements commenced in July 2001. In areas nominated by the ACA, Telstra is the Primary Universal Service Provider (PUSP) and other carriers can elect to register as Competing Universal Service Providers (CUSPs).

A CUSP must supply an 'Alternate Telecommunications Service' on demand to anyone in the nominated areas. In return, it receives an agreed USO subsidy amount for each USO customer it signs up.

Telstra, as the PUSP, receives the USO subsidy for all the customers not signed up by a CUSP and an additional payment reflecting its carrier of last resort status in the nominated areas.

All licensed carriers share the cost of the total subsidy payments, according to their share of total eligible revenue, as under standard USO arrangements.

In 2001/02, \$34 million out of a total of \$240 million in USO subsidies will be allocated through USO contestability arrangements.

In response to these developments, the government established the Telecommunications Service Inquiry (the Besley Inquiry) in March 2000 to assess and make a certification on the adequacy of rural telecommunications ser-

<sup>21</sup> 'Digital Data Review', Ministerial media release, 6 May 1998.

<sup>22</sup> 'Government expands funding for Networking the Nation', Ministerial media release, 11 July 1998.

<sup>23</sup> 'Government announces \$171 million boost to regional funding', Ministerial media release, 16 December 1999.

<sup>24</sup> 'Six month extension to Telstra price caps', Ministerial media release, 14 December 1998.

<sup>25</sup> 'Government to cap net Universal Service Cost', Ministerial media release, 25 March 1999

<sup>26</sup> 'Senate approves better rural phone services, consumer protection and telecommunications competition', Ministerial media release, 22 June 1999

<sup>27</sup> 'Agreement on AMPS phaseout in regional Australia', Ministerial media release, 30 November 1998.

vices.<sup>28</sup> In the same year it initiated greater use of competitive processes by inviting:

- competitive tenders for \$150 million for the provision of untimed local calls in Extended Zones;<sup>29</sup>
- competitive tenders for \$25 million for providing improved mobile phone coverage on nominated rural highways;<sup>30</sup> and
- carrier participation in USO contestability trials (see Box 5).<sup>31</sup>

Overviews of the Extended Zones tender and USO Contestability are in Appendix 4.

The USO contestability trials represented a significant shift in strategy. For the first time, USO subsidies were to be made accessible to carriers other than Telstra. In addition, the initiatives contemplated that more than one carrier could offer the standard telephone service in a nominated area.

However the government still continued to rely on more traditional responses. Following the report of the Besley Inquiry, it allocated an additional \$163 million for improving telecommunications services in rural Australia.<sup>32</sup> This included:

- \$50 million for better quality and faster access to dial-up Internet services; and
- \$52 million for a National Communication Fund.

The introduction of competition into the delivery of USO services, together with the Extended Zones and Highways tenders, challenged the assumptions of monopoly, compliance, prescription and cost subsidisation.

<sup>28</sup> 'Telecommunications Service Inquiry', Ministerial media release, 19 March 2000.

<sup>29</sup> 'Calls for tenders for \$150 Million social bonus project', Ministerial media release, 23 March 2000. The term 'Extended Zones' is used in this paper to describe those areas (nearly 80% of Australia) that benefited from this tender. A map showing the Extended Zones is provided in Appendix 4.

<sup>30</sup> '\$25 Million Mobile Phones on Highways Tender', Ministerial media release, 22 August 2000.

<sup>31</sup> 'USO contestability pilot areas announced', Ministerial media release, 23 August 2000.

<sup>32</sup> 'Listening and delivering on better regional telecommunications services', Ministerial media release, 15 May 2001.

## 5. Outcomes

The 2001 federal election witnessed vigorous debate about the possible further privatisation of Telstra. At the heart of this debate was the unchallenged view that rural telecommunications services were not of an acceptable standard, although substantial improvements had been achieved (see Box 6). For example:

- all consumers had obtained access to untimed local call charges;
- the quality of services had increased;
- a wider range of services had become available;
- implementation, repair and maintenance standards had improved; and
- the cost of telephony had decreased.

### Box 6: Rural telecommunications services – objectives vs outcomes

1. *Senator Alston, Minister for Communications, Information Technology and the Arts, Media release, 7 July 1996:*

The Government is strongly committed to the concept of universal service, which ensures that a Standard Telephone Service is available to all Australians on an equitable basis no matter where they live or work.

2. *Standard Telephone Service Review Group, December 1996:*

By the year 2000 'a digital data capability' should be reasonably accessible to all Australians on an equitable basis wherever they reside or carry on business.

3. *Telecommunications Service Inquiry, 'Connecting Australia, Report of the Telecommunications Service Inquiry', AGPS, Canberra, September 2000, Executive Summary:*

The Inquiry heard the frustrations of many consumers, particularly concentrated in rural and remote Australia, in getting basic and reliable telephone services connected quickly and repaired in a timely manner. ...

Many consumers, again with a greater concentration in rural and remote Australia, experience slow data speeds when accessing the Internet. ...

It is important from a national perspective that the existing telecommunications disadvantage experienced by many Australians in rural and remote

areas is addressed.

4. Productivity Commission, ‘*International Benchmarking of Remote, Rural and Urban Telecommunications*’, Research Report, Aus-Info, Canberra, July 2001:

One reason for the interest in telecommunications services in remote and rural areas is the relatively high cost of provision in these areas and the associated difficulty in ensuring a quality of service and price comparable with urban areas.

The shortcomings, however, reflected changing consumer expectations and the loosely defined objectives (e.g. affordability, reasonable access, equity and ubiquity) of the universal service regime. Services rated inadequate in 2001 would have been welcomed in 1991. For example, ubiquitous access to untimed local calls would have satisfied rural consumers in 1991. By 2001, when that objective had been achieved, a higher benchmark of ubiquitous access to untimed national calls was being advocated by the Australian Labor Party (ALP) as a basic telecommunications right.<sup>33</sup> Static measures of telecommunications service standards thus have a limited shelf life and provide an incomplete basis for analysing the effectiveness of a rural telecommunications regime.

In a dynamic industry, arrangements are needed that motivate a telecommunications carrier to make continual improvements in service levels in response to changing consumer expectations, without relying on regular government intervention to upgrade minimum standards.

### 5.1 Monopoly entrenchment

The universal service regime was introduced as a substitute for market forces, to ensure the delivery of minimum services to end users. Natural monopoly assumptions led to Telstra being the only licensed carrier entitled to be subsidised to provide services in rural areas –at least \$1,353 million over five years. Other carriers could not have competed against the subsidised Telstra in rural markets, unless they had significantly lower cost structures.

<sup>33</sup> Australian Labor Party, *Knowledge Nation*, July 2001, p. 41.

### Box 7: Rural telecommunications subsidies

Scheme	Subsidy	Beneficiary	
		Telstra	Other carriers
<b>Industry funded</b>			
USO 1997/98	\$523m		
USO 1998/99	\$280m		
USO 1999/00	\$281m		
USO 2000/01	\$299m		
USO 2001/02	\$240m		
Subtotal	\$1,353m	\$1,353m	
<b>Government funded</b>			
NtN	\$481m	\$32m +	
Besley	\$163m	?	
Extended Zones	\$150m	\$150m	
Highways	\$25m		\$25m
Subtotal	\$819m		
<b>TOTAL</b>	<b>\$2,172m</b>	<b>\$1,535m +</b>	<b>\$25m</b>

Sources: ACA reports and Ministerial media statements

Of a total of \$819 million in rural telecommunications federal grants, little more than \$25 million has been allocated to carriers other than Telstra.<sup>34</sup> In the same period, Telstra won the \$150 million tender for providing untimed local calls in Extended Zones and benefited extensively from funds allocated through NtN for rural telecommunications infrastructure development projects.<sup>35</sup> See Box 7.

In addition, the CSG deterred competition. Responding to a Besley Inquiry recommendation that ‘the Customer Service Guarantee be amended to apply only to Universal Service

<sup>34</sup> Vodafone won the tender for \$25m to provide mobile phone coverage on nominated rural highways.

<sup>35</sup> For instance, Telstra has been the prime carrier beneficiary of \$32.2m allocated for 88 mobile phone projects across Australia.

Providers',<sup>36</sup> the ACA released a discussion paper on the CSG in which it recorded comments by both Telstra and Optus that described the CSG as a barrier to market entry.<sup>37</sup> The universal service regime thus discouraged new carriers from entering the rural telecommunications market.

## 5.2 Service minimisation

In the absence of competition, there is little commercial incentive for a carrier to supply more than the minimum service required by law— or even to meet minimum requirements. For example, if Telstra had decided to provide a higher level of service when the opportunity cost of doing so exceeded any resulting marginal benefit, it could have been in breach of its obligation to shareholders to maximise its return on investment funds.

A failure to increase investment in a monopoly market would have been of minimal commercial consequence, as there would be no risk of losing market share. On the other hand, the opportunity cost of transferring scarce investment funds from a competitive market to that monopoly market could have been a loss of market share and revenue in the competitive market.

As reported by the ACA, the reality appears to have been that Telstra's rural customers experienced less than the prescribed minimum service levels, with the ACA reporting a continuing failure by carriers to meet the CSG standards for new connections and fault reporting; although the ACA reported this under the heading 'Major Carriers Perform Well'.<sup>38</sup> The pecuniary penalties for sub-standard performance were apparently insufficient to motivate Telstra to achieve the minimum standards. This suggests that the specification of minimum performance standards (and the associated penalties for not meeting those standards) has not been an effective

tool for ensuring a prescribed level of service in a competitive market.

## 5.3 Resource diversion

Until the introduction of USO contestability, the only method available to carriers other than Telstra for controlling their USO costs was through the design and application of the Bellcore model. As Telstra's claim for USO losses incurred in 1997/98 would have increased the carriers' USO costs eightfold, the claim, and the methodology on which it was based, became the subject of intense carrier scrutiny. Cost allocation is complex at the best of times. When it involves substantial payments, that very complexity can be used to obfuscate and delay the finalisation of any such payments.

After three years of extensive debate, submissions and expert advice, the Minister set the USO amount for 2001/02 at \$240 million<sup>39</sup>. In real terms, this was less than the \$295 million estimated by the BTCE twelve years earlier to be the maximum cost for the USO in 1989.

The opportunity cost to the public of this status-quo outcome was high. Scarce carrier resources diverted into a very complex and contentious technical debate on the cost of supplying rural services could instead have been directed towards implementing service improvements.

Other initiatives also had high costs. For example, the NtN program required substantial input from local communities to prepare grant proposals, from public servants to assess all proposals and from carriers to submit tenders. Similarly, the enforcement of CSG standards involved extensive ACA monitoring, industry reporting and compliance procedures.

The reliance on cost-proxy models, performance monitoring and one-off grants tied up resources that might otherwise have been allocated more beneficially to additional rural telecommunications development projects.

## 5.4 Consumer dissatisfaction

The impact of these dysfunctional outcomes can be measured both by the public debate sur-

<sup>36</sup> Telecommunications Service Inquiry, September 2000, Recommendation 5.

<sup>37</sup> ACA, 'Review of the Telecommunications Customer Service Guarantee', AusInfo, Canberra, [http://www.aca.gov.au/consumer/csg/csgreview2001\\_dp.htm](http://www.aca.gov.au/consumer/csg/csgreview2001_dp.htm), September 2001, paragraph 6.28.

<sup>38</sup> ACA, 'Major Carriers Perform Well', Media Release on *Telecommunications Performance Monitoring Bulletin* for the June 2001 quarter, 24 September 2001. This and all subsequent media releases referred to as 'ACA media release' are available at [www.aca.gov.au](http://www.aca.gov.au).

<sup>39</sup> 'USO subsidies secured for the next three years', Ministerial media release, 2 October 2001.

rounding the further privatisation of Telstra and the evidence of the official inquiries:

Of particular note is the greater degree of concern expressed by rural and remote Australians about service levels compared with those in metropolitan areas. . . . The Inquiry heard the frustration of many customers, particularly concentrated in rural and remote Australia, in getting basic and reliable telephone services connected quickly and repaired in a timely manner.<sup>40</sup>

Australian rural and remote telecommunications users experience some disadvantages compared with urban users . . .<sup>41</sup>

Complementing this, the number of Ministerial media releases relating to rural telecommunications matters almost quadrupled from the first three years of the Howard Government to the three years to September 2001.<sup>42</sup> This suggested an increase in political focus on rural telecommunications issues, in response the political imperatives mentioned earlier, and associated consumer dissatisfaction.

### 5.5 The scope for improvement

These outcomes lead to the conclusion that there is scope for improvement in regulatory arrangements, noting that the principles underlying the current regime were based on views about the market that prevailed in the late 1980s. Since those principles were adopted, technology costs have reduced, consumer expectations have increased and the market has experienced dynamic and continuing change.

While the level and quality of rural telecommunications services achieved in 2001 might have satisfied consumers in 1991, the regulatory framework has been inadequate to ensure that

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<sup>40</sup> Telecommunications Services Inquiry, September 2000, Executive Summary.

<sup>41</sup> Productivity Commission, 'Remote, Rural and Urban Telecommunications', Media release, <http://www.pc.gov.au/research/benchmrk/rarts/finalreport/mediarelease.html>, July 2001.

<sup>42</sup> In the first Howard Ministry, an estimated 19 per cent (35 of 181) of media releases by Senator Alston related to rural telecommunications matters. In the second Howard Ministry, an estimated 36 per cent (112 of 312) of media releases by Senator Alston related to rural telecommunications matters; in addition, an estimated 26 per cent (22 of 83) of media releases by Senator Campbell (Parliamentary Secretary to the Minister for Communications, Information Technology and the Arts) related to rural telecommunications matters.

carrier performance kept pace with consumer expectations. Tinkering with the regulatory approach did not fix the problem – and is unlikely to in the future.

## 6. The opportunity for change

From a commercial perspective (see Box 8), there are compelling reasons why the rural telecommunications market could attract greater interest from carriers:

- consumers in rural Australia value telecommunications services highly. The ACA assessed that, for 1997/98, in the most remote areas of Australia the average revenue per service in operation was \$1,676.51, compared to an average revenue of \$666.46 in built-up areas;<sup>43</sup>
- there is a viable opportunity for a new carrier to achieve competitive differentiation through offering improved service levels, given consumer dissatisfaction with current service levels;
- compared to the highly contested metropolitan markets, most rural markets have only one telecommunications network, that of Telstra; and
- USO subsidies provide a unique additional revenue source that would also result in a reduction in a carrier's net USO levy contribution.

The single most significant factor discouraging the competitive supply of telecommunications services in rural Australia is cost. In this area also, there have been major changes:

- improvements in technology have reduced costs. This is reflected in a significant reduction in the size of the USO amount in the 14 years since the first BTCE estimate: down from \$295 million in 1989, to \$231 million set for 2003/04<sup>44</sup>;
- technology and service convergence provides opportunities to exploit economies of scope and new revenue streams. Interactive television, wireless delivery of fixed and

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<sup>43</sup> ACA, *Net Universal Service Cost Assessment for 1997-98*, AGPS, Canberra, [http://www.aca.gov.au/issues/report/NUSC\\_FAssess1997-98.htm](http://www.aca.gov.au/issues/report/NUSC_FAssess1997-98.htm), October 1999, p. 118.

<sup>44</sup> 'USO subsidies secured for the next three years', Ministerial media release, 2 October 2001.

mobile services, broadband infrastructure carrying both telecommunications and broadcasting services, internet telephony and integrated communications services earning new advertising and transaction-based revenues will all contribute to the achievement of cost-efficiencies and the delivery of improved benefits to consumers; and

- carrier funding of the USO amount could be used to promote the competitive supply of rural telecommunications services.

### **Box 8: Rural telecommunications – a commercially viable market**

- Demand exceeds supply
- Revenue per rural customer >> revenue per metropolitan customer
- USO subsidies provide a unique additional revenue source
- Limited competition
- Carriers can exploit economies of scope resulting from technical and service convergence

The greater commercial attractiveness of the rural telecommunications market and the reduction in technology costs represent a significant change from the environment that existed in 1987. Given this, and continuing dissatisfaction with rural telecommunications services, it is timely to examine the options for regulatory reform.

## **6.1 Theoretical foundations**

Debate on universal service matters gave rise to numerous studies commissioned by the federal government<sup>45</sup> and submissions to various USO discussion papers and Senate inquiries. Despite this, there was little objective, in-depth, independent research that examined universal service arrangements from first principles and could provide a substantive foundation for reform.

Richard Joseph has suggested that ‘since 1975, there has been a steady erosion in the concept of universal service in Australia’, attributing this to a ‘slavish adherence to efficiency’.<sup>46</sup> He does not, however, reconcile this with the improvement in telecommunications services that rural consumers have actually experienced over that time, nor does he propose specific changes to universal service arrangements.

On the other hand, economic theorists such as Laffont and Tirole have advocated the need for a new paradigm for universal service, recognising that it is ‘a central issue in the political debate surrounding regulatory reform in all network industries’ and that the ‘mechanism of cross-subsidies is coming to an end in developed countries’.<sup>47</sup> They discuss two models for the competitively neutral provision of universal service: cost-proxy models and auctions. However, they do not discuss whether the evolving telecommunications market actually diminishes the need for any intervention strategy in the first place.<sup>48</sup>

There have been many initiatives announced in Australia, but none have been supported by any systematic re-evaluation of the policy framework. This creates the danger of ad hoc, patchwork responses which are more politically driven than cost-effective.

Regulatory intervention has to date been compliance-focused and reactive, directed at the supply side of the industry. There is no compelling evidence, however, to confirm that continued reliance on this strategy into the future will be effective in reducing this gap; or in preventing the gap from becoming wider as the communications industry continues to change rapidly. Public attention continues to focus on shortcomings in the range, quality and cost of rural telecommunications services, despite new initiatives being announced on a regular basis.

With this changing telecommunications market, there is an opportunity to review regulatory intervention strategies and to examine the alter-

<sup>45</sup> For example, the ACA engaged Gibson Quai, Ovum and The Allen Consulting Group to advise on various USO costing matters and the Department of Communications, Information Technology and the Arts engaged KPMG to advise on USO reform options – although this report was never made public.

<sup>46</sup> R. A. Joseph, ‘The craze for efficiency: universal service in Australian communications’, *The Journal of Policy, Regulation and Strategy for Telecommunications and Media*, vol. 3, no. 1, February 2001, pp 73 & 81.

<sup>47</sup> J-J Laffont and J Tirole, *Competition in Telecommunications*, MIT Press, Cambridge, MA, 2000, p 218.

<sup>48</sup> Laffont and Tirole, Ch. 6.

natives for promoting improvements in telecommunications services in rural Australia. Three options are examined: regulatory compliance, incentives and laissez-faire.

### 6.2 Regulatory compliance

This is the current approach. Four main regulatory levers are available for influencing the delivery of rural telecommunications services: government direction; ownership of Telstra; the USO scheme; and general regulatory provisions.

Government direction was the primary lever pre-1975 when the PMG, as a department of state, had responsibility for telecommunications services. This meant that government had first-hand involvement in the provision of telecommunications services.

Ownership of Telstra has already been mentioned. In public debate this has been advocated as a means of protecting and improving the quality of rural telecommunications services.

Neither option is worth further close consideration in the absence of determination by the government to achieve real change. Putting to one side the political controversy surrounding Telstra privatisation, neither major political party has advocated that Telstra should be directed to operate on a non-commercial basis, or explained how it would use public ownership of Telstra to improve better implementation of universal service objectives.

For example, the Shadow Minister stated in August 2001: 'The only way in which Telstra can be forced to make uneconomic decisions is if the Government of the day directs the Board. Labor will not direct the Board.'<sup>49</sup> Similarly Senator Alston, the Minister, said one month later: 'The truth is that services are guaranteed by law under the Universal Service Obligation (USO), Customer Service Guarantee (CSG) and price caps legislation, regardless of the ownership of Telstra.'<sup>50</sup>

Currently, the primary lever is the USO Scheme. At a cost to the industry of \$1,353 over the five year period 1997/98 to 2001/02, the USO

scheme is the single biggest regulatory initiative focusing on rural telecommunications services.<sup>51</sup>

The need for the USO scheme is due, in part, to the existence of another regulatory compliance mechanism – price caps. Without price regulation, it would be possible for Telstra to recoup from its tariffs any losses it incurred in meeting its statutory obligation to provide the standard telephone service. As the ACA has indicated, the existence of the price caps means that there would be no service without the subsidy: 'in the absence of the USO, Telstra would not provide service to NLAs (net loss areas)'.<sup>52</sup>

Other general regulatory compliance measures include the CSG, the DDSO and the SDDSO, mentioned earlier.

The use of these measures implies that carriers will not voluntarily increase performance levels to give consumers 'reasonable access, on an equitable basis, to standard telephone services ... and digital data services'.<sup>53</sup> They also give government dynamic control over minimum service standards. At a time of concern about service levels in rural Australia, having the ability to require improved services has its political advantages. But this can be a double-edged sword.

In the first place it requires an ongoing interventionist role for the government in a sector where government is generally seeking to place greater reliance on industry self-regulation and outsourcing tasks previously undertaken by the federal government. There are therefore regulatory costs and inefficiencies.

Secondly, the greater the involvement of government in a sector where consumer expectations are constantly increasing, the longer it may take for services to improve. For example, the Minister did not place the DDSO licence condition on Telstra until two years after he sought advice from the STSRG about upgrading the standard telephone service. Consultation obligations, legislative requirements and bureaucratic processes all constrain timely remedial action, particularly where an issue is politically sensitive.

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<sup>49</sup> Stephen Smith MP, Shadow Minister for Communications, 'Telstra and Australia's Broadband Future', a paper presented to SPAN General Meeting, Sydney, 1 August 2001, p11.

<sup>50</sup> 'Warning', Ministerial media release, 5 September 2001.

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<sup>51</sup> The next largest funding allocation is the five year NtN program, to which a total of \$481 million has been allocated.

<sup>52</sup> ACA, 'Net Universal Service Cost Assessment for 1997-98', October 1999, p14

<sup>53</sup> This is the main object of the regime. See footnote 8.



In addition, direct government involvement can foster a cargo-cult mentality regarding improvements in rural telecommunications services, which results in a significant drain on the public purse, and discourages innovative solutions that might deliver faster and more beneficial results.

In the context of a dynamic industry, where consumer expectations about telecommunications rights have increased over the last five years, and for reasons of cost and timeliness, options other than regulatory compliance should be examined. This is beginning to occur. As mentioned elsewhere, recent initiatives include the introduction of USO contestability pilot trials and the allocation of \$819 million in funding incentives.

### 6.3 Incentives

An incentives approach is different to a compliance approach in a number of ways. For example:

- *It rewards good performance rather than penalising poor performance.* In the USO contestability trials, a Competing Universal Service Provider (CUSP) is only paid a subsidy for a customer if it provides a sufficiently good service to attract that customer to sign up in the first place. This contrasts with CSG arrangements, where a pecuniary penalty is imposed if a carrier fails to meet prescribed standards.
- *It empowers consumer choice in place of third party prescription of minimum service levels.* In the USO contestability trials, CUSPs can be expected to offer consumers services that go beyond minimum service levels in order to attract customers and thereby gain their USO subsidy as new revenue.
- *It facilitates the achievement of higher service targets rather than the acceptance of lowest common denominator performance.* As part of its successful Extended Zones tender for ubiquitous access to un-timed local calls, Telstra included a commitment to supply a minimum dial-up internet access speed of 14.4 kbps, above the 2.4 kbps defined in the ACA's 'End-to-end Network Performance Standard'.

A range of incentives can influence carrier behaviour: regulatory commitments; access to

funding; franchise specification; and company endorsement.

The first of these, *regulatory commitments*, were used in the selection of new licensed Australian carriers, Optus and Vodafone, in 1991 and 1992 respectively. In these tender processes, the government negotiated contractual undertakings about network roll-out, industry development and service offerings in return for government commitments about future regulation. These commitments included: not licensing more carriers before 1 July 1997, a shut-down of the analogue AMPS system by 1 January 2000, a fast-track planning process for infrastructure roll-out, and an industry-specific competition law.

Significantly, the carrier undertakings were voluntary, rather than imposed by the government. While there has been no independent evaluation of whether the carriers have met all of their contractual commitments, competitive pressures have resulted in some commitments being met earlier than originally agreed (e.g. network roll-out).

The federal government also raised the possibility of using incentives to influence carrier behaviour following a High Court ruling forcing Foxtel to provide open access through its set-top boxes. In response to a pay TV player expressing concern that it would have to provide access at potentially uncommercial rates, the Minister was reported as saying that if uncertainty on investment returns precluded digital upgrades, 'we will have to find sufficient incentives.'<sup>54</sup>

The control of *access to funding* has been used extensively since 1997. As indicated above, the government committed over \$819 million in the five year period from 1997/98 to 2001/02 through competitive allocation processes to improve rural telecommunications services. In addition to this, in 2001 it opened up access to the USO subsidies in Extended Zones (worth \$35 million in 2001/02) and in the USO contestability pilot areas (worth \$37 million in 2001/02).<sup>55</sup>

<sup>54</sup> 'Government steps in to allay Foxtel fears', *The Australian*, 15 August 2001, p. 35.

<sup>55</sup> ACA, 'Advice to the Minister New USO Arrangements', AusInfo, Canberra, <http://www.aca.gov.au/consumer/uso/Report%20on%2000-03%20-%20Final.pdf> September 2000, p. 3.

As occurred in the tender process for selecting the new telecommunications carriers in 1991 and 1992, the Extended Zones tender resulted in Telstra, the successful tenderer, volunteering commitments that went beyond minimum service level obligations: a minimum dial-up Internet speed of 14.4 kbps (with 19.2 kbps or higher being available to as large a proportion of customers as possible); an optional 'always on' satellite-based Internet service; and untimed local call access to at least one Internet Service Provider (ISP), regardless of where the call originated.<sup>56</sup>

Similarly, a better than minimum outcome was achieved when Vodafone won the tender for providing mobile coverage on rural highways. Rural customers were expected to benefit from a greater duplication of mobile coverage along these highways, as Vodafone had more coverage gaps to fill than Telstra. The Minister said that 'many more people in rural Australia will have access to an alternative network - providing a boost to competition in the regions.'<sup>57</sup> In both these competitive processes, the commitments made by the winning tenderers were underpinned by contractual, rather than regulatory, obligations.

The government used *franchise specification* to achieve specific policy objectives in the allocation of radiofrequency spectrum for 3G wireless services: licensing of new entrants and revenue targets. To this end, the commercial attractiveness of the licences was increased by decisions made about national or regional spectrum licences, the allocation methodology, the licence period, spectrum caps, timing, bandwidth, reserve price, licence conditions and the total amount of spectrum to be made available.

Finally, *company endorsement* by government has been a long-standing strategy for promoting industry development. In return for a company committing to a certain level of industry development activity in Australia, the government gives public recognition to that company. In August 2001, there were 73 companies participating in the Partnership for Development program, with more than \$4.2 billion spent on research and development and \$15.9 billion in exports

reported to date,<sup>58</sup> although it is arguable what proportions of these outcomes are directly attributable to the program.

At the end of a list of the potential advantages of an incentive-based approach, some of the disadvantages or challenges should be mentioned. These include the opportunities for the promotion of political self-interest, such as through the allocation of grants for telecommunications infrastructure development (e.g. NtN) – a throwback to PMG days when rural telecommunications services were closely aligned with political interests; and for revenue collection to dominate the agenda of the government and regulator at the expense of improving services; for example the spectrum auctions, which siphoned funds out of the communications sector.

More fundamentally, an incentives approach requires active planning and decision-making by a federal government body. For the incentives to fulfil their promise, an official entity is required to take command of an overall plan and implement it with energy and consistency. To mention a few examples, some entity is required to manage tender processes, to negotiate with tenderers, to consult communities, to assess the value of their offerings, to define the geographic areas in which competition will operate, and to distribute large sums of public and industry funds. This kind of hands-on decision-making has been out of fashion in the federal sphere in recent years. It is practised with considerable success in countries such as Singapore and Korea, but in Australia the fashion is for all government bodies to be classified as regulators and confined to narrow roles. The question is whether the federal parliament and the executive government would be prepared to clothe the ACA, or any new entity, with sufficient freedom and authority to administer an incentive-based scheme.

### 6.4 *Laissez-faire*

The main feature of a *laissez-faire* approach is reliance on the operation of the marketplace to deliver a desired outcome. This potential exists within the telecommunications sector where reducing technology costs and increasing customer demand could lead to sustainable competition.

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<sup>56</sup> 'Untimed local calls for remote and rural Australia', Ministerial media release, 14 February 2001.

<sup>57</sup> 'Extended mobile phone coverage on highways', Ministerial media release, 28 February 2001.

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<sup>58</sup> 'Symantec Australia receives national recognition', Ministerial media release, 7 August 2001.

This strategy has several advantages over the others as it keeps regulatory costs to a minimum, and does not require an active administrator of planner, as the incentives approach does. It also reduces dysfunctional outcomes and is sensitive to customer needs. It was, for example, the strategy preferred by the STSRG in its recommendation not to mandate the provision of mobile services.

Whilst this strategy offers many opportunities for improving basic telecommunications services in rural Australia, there is little support for it on either side of politics. The further privatisation of Telstra, continuing complaints about Telstra's performance in rural Australia, the electoral significance of the rural constituency, growing public antipathy to economic rationalism and an emphasis on the existence of a digital divide all militate against this strategy.

In addition, there is no conclusive evidence that the telecommunications market in rural Australia is able to sustain a substantial competitor to Telstra on a commercially viable basis. While licences have been issued for a number of regional telecommunications carriers, it remains to be seen what market share they will win, and whether this will be sufficient for their long-term viability. Unfortunately, the recent downturn in the telecommunications market has done little for their prospects.

Further, there is insufficient independent, rigorous and objective economic analysis to counter the common perception that the provision of telecommunications services in rural Australia is a natural monopoly.

It is therefore difficult to be confident that a laissez-faire approach would deliver the desired objectives sufficiently well for adoption by the government in a sensitive policy environment. The political risks of a perceived failure in rural telecommunications policy are high; and the political gains of any such change are likely to be small in the short term.

## 7. Options for change

Regulatory reform of this area seems overdue in Australia and overseas (see Box 9). In a perfect market, a laissez-faire approach should be the strategy of choice. However, given lack of political support for it and the need for rural telecommunications to mature further, an incen-

tives-based approach may provide the most realistic avenue for a transition towards the laissez-faire ideal. The government has several incentives at its disposal:

- activation of a further \$170 million per annum in USO payments as performance rewards;
- empowerment of consumers to respond in a commercial way to poor carrier service;
- integration of subsidies across the telecommunications sector to promote integrated service solutions; and
- use of USO industry funding arrangements to encourage competing universal service providers to enter the market.

In addition, the sector is sufficiently robust for a government body to be more pro-active in setting targets to be reached over time, rather than setting minimum benchmarks to be met by universal service providers. In setting a vision and providing incentives, the government can promote improvements in service levels, and replace compliance measures that constrain the ability of carriers to exploit the opportunities thrown up by technological change.

A reliance on incentives requires the assumptions about natural monopoly, compliance, prescription and cost subsidisation to be replaced. This is consistent with the trend in recent developments in rural telecommunications, as discussed earlier:

- tenders encompassed the possibility of multiple carriers in rural Australia;
- CUSPs are not subject to price regulation (e.g. untimed local calls);
- commercially negotiated contracts have specified higher than minimum telecommunications service levels; and
- financial incentives have stimulated service improvements.

### Box 9: Overseas experience

The issues faced in Australia are not unique, nor are the solutions. The Chairman of the FCC has said:

Universal service has been very successful in bringing telephone services to all Americans, and narrow-band Internet services as well. Yet the program we steward today was constructed on a monopoly environment. It was an outgrowth of that turn of the century marriage between Ma Bell and Uncle Sam. It has

also proven to be an under-appreciated obstacle to bringing competitive service to all Americans. I think we have a golden opportunity with broadband to deploy new services to all Americans, while ensuring proper economic principles are preserved, so that those services are low priced, competitive and innovative.<sup>59</sup>

The award of the Extended Zones tender to Telstra in 2001 provides prima facie evidence that rural telecommunications is viewed as a commercially attractive market in its own right. In contract negotiations, Telstra committed to this market without any guarantee of being the sole universal service provider for more than three years. Its business plan could not make assumptions beyond the 2003/04 financial year about either exclusive access to the USO subsidies in this market, or maintenance of the size of the USO subsidies.

In addition, in this process tenderers developed commercial business plans that covered the least densely populated areas of Australia, without any certainty of continuing monopoly access to USO subsidies beyond three years. This points to the likelihood that more densely populated areas in rural Australia could also support the competitive supply of services.

With regard to financial incentives, in the five year period 1997/98 to 2001/02, of an estimated \$2,172 million allocated for funding rural telecommunications services, up to \$888 million<sup>60</sup> has been allocated through competitive processes as incentives for carriers to deliver improved rural telecommunications services. In this five year period, 40 per cent of funding for rural telecommunications improvements will have been competitively allocated, whereas none was competitively allocated in the previous five years of competition.

A de facto shift is occurring in rural telecommunications policy, but with no systematic justification. In response to this, the following

suggested initiatives are based on the principles of industry convergence, competitive processes, consumer power and industry incentives.

### **7.1 A new benchmark**

Historically, access to untimed local calls has been a benchmark for 'reasonable access on an equitable basis, to the standard telephone service'. Its realisation<sup>61</sup> raised the question of whether it should be upgraded, as a precursor to any reform of rural telecommunications regulatory provisions.

In 2001, the ALP proposed a new benchmark – a single national call zone, building on a consumer's right of access to an untimed local call tariff. This extended a trend in pricing strategy already being pursued by telcos (e.g. capped long distance call rates; one charging zone for mobile services; untimed local call internet access from anywhere in Australia). It also built on new revenue streams (transactions and advertising) and new technology (Voice over Internet Protocol). Another proposed benchmark was ubiquitous untimed local call access to high speed broadband services.

In common with many other initiatives, these proposals were not costed,<sup>62</sup> but suggested as possible targets against which specific rural telecommunications initiatives and the technical manipulation of USO arrangements could be implemented.

### **7.2 Reducing unnecessary duplication**

There is little rationale for more than one carrier (the PUSP) to be obligated to supply the standard telephone service. Provided all consumers have access to this service, then other carriers should not be obliged to duplicate it. It is for consumers to select the service that best meets their needs. A competitor can always elect to offer this service if there is demand for it.

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<sup>59</sup> Remarks of Michael K. Powell, Federal Communications Commission (FCC) at the National Summit on Broadband Deployment, Washington, D.C. October 25, 2001  
<<http://www.fcc.gov/Speeches/Powell/2001/spmkp110.htm>  
><http://www.fcc.gov/Speeches/Powell/2001/spmkp110.html>

<sup>60</sup> \$35m (Extended Zones USO subsidy); \$34m (USO Contestability pilots); \$481m NtN; \$163m Besley; \$150m Extended Zones; \$25m rural highways.

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<sup>61</sup> As a consequence of the success of the Extended Zones tender.

<sup>62</sup> No cost-benefit analyses were provided, for example, for the Extended Zones and mobile phone coverage on highways tenders, CSG initiatives, price controls, the rebate on equipment for the digital data asynchronous satellite service or the NtN program.

This approach avoids inefficient duplication, increases the scope for tailoring services to meet consumer preferences and ensures that a consumer's basic telecommunications rights are met.

### **7.3 Contested allocation of subsidies**

The success of the Extended Zones tender casts doubt on whether natural monopoly conditions still apply to the delivery of rural telecommunications services. This 'winner takes all' contestable allocation of subsidies could also be applied to other less remote USO areas. Alternatively, the USO contestability approach could be adopted.

Either way, the government could use competitive processes to secure improvements in rural telecommunications services, by exploiting carrier interest in access to the \$170 million in USO subsidies paid annually to Telstra on an uncontested basis.

This choice would also allow an affected community to be consulted about which competitive process should be adopted in its area.

### **7.4 Integrated allocation of subsidies**

Until recently, there was little integration of the various subsidies available for funding rural telecommunications services. This changed with the \$150 million Extended Zones tender, as it included exclusive access for three years to the USO subsidies in those areas. In addition, only CUSPs are eligible to receive Building Additional Rural Networks (BARN) funding for projects delivering new networks in the areas in which they are registered.<sup>63</sup>

On the other hand, while GSM has been assessed to be the most economical solution for the supply of the standard telephone service in some rural areas,<sup>64</sup> no allowance has been made

for this in the assessment of applications for NtN grants for mobile telephony in those areas.

Allowing only CUSPs to receive grants for infrastructure development would increase the incentive for a carrier to register as a CUSP, and promote the competitive supply of services, to the long-term benefit of the consumer.

### **7.5 Strengthening USO contestability**

In the USO debate, interested parties took positions that reflected whether they had a net USO levy credit (Telstra) or a net USO levy debit (all other carriers). These positions were presented in technical debates about issues such as the cost of capital, the most cost-effective technology, statistical sampling techniques and the measurement of intangible benefits. One factor lacking in the debate was commercial discipline: just as Telstra had little incentive to agree to a reduction in cost estimates, so the other carriers had little incentive to agree to an increase in cost estimates.

A strategy of increasing the subsidy amount until there is competition in a USO contestability area, as outlined in Appendix 5, could defuse these debates by forcing commercial judgements to be made by all parties about being a universal service provider. In this situation, the subsidy would no longer be a reimbursement of a loss. Instead it would become an incentive to provide a service, with those choosing not to provide a service making the judgement that the loss they might incur in providing the service would be greater than the cost of the USO levy to subsidise another carrier to provide the service.

This strategy of increasing the USO subsidy to establish competition in the provision of services would lead to a more equitable sharing between carriers of the USO losses incurred by Telstra or an increase in the range of services offered to consumers. Both outcomes are desirable:

- (i) If the USO subsidy amount is less than the loss incurred by Telstra in providing the standard telephone service, then Telstra would fund both its pro-rata share of the total subsidy and the difference between its total loss and the total subsidy. An increase in the USO subsidy would reduce this inequitable distribution between carriers of USO losses.

<sup>63</sup> 'High speed regional networks on the fast track', Ministerial media release, 12 September 2001.

<sup>64</sup> Gibson Quai Pty Ltd, '*USO forward looking technologies for 1998/99 and 1999/2000*', AGPS, Canberra, [http://www.aca.gov.au/consumer/uso/usotechnology\\_report.pdf](http://www.aca.gov.au/consumer/uso/usotechnology_report.pdf) January 2000, p. 56.

- (ii) If the USO subsidy amount is greater than the loss incurred by Telstra, then Telstra would benefit from a windfall gain, at the expense of its competitors. This would be inequitable if Telstra had exclusive access to the subsidy – as indeed was the case in Telstra’s 1997/98 \$1.8 billion USO claim. By opening up the subsidy to competition, however, consumers would benefit from having access to a choice of service provider and service offerings and, as outlined in Appendix 5, the scheme could assist a regional carrier to enter its local market. The issue in this case is whether the additional cost of establishing competition is justified by the consumer benefits it generates.

This need not result in a significant escalation of costs. The ‘Extended Zones’ approach could be substituted for a ‘contestable area’ approach when the USO subsidy levels reached a pre-determined limit. Instead of inviting carriers to register as a CUSP in an area, the government could invite competitive tenders to be the PUSP in the area, with exclusive access to USO subsidies for the next three years.

### **7.6 Carrier funding**

As discussed earlier, the eightfold increase in the USO amount claimed by Telstra for 1997/98 motivated carriers to re-engage in the USO debate, as it was carriers who had to meet the cost of this increase. If the Commonwealth had funded the amount, there may still have been concerns expressed about Telstra gaining an unfair competitive advantage through exclusive access to substantial funds, but the commercial impact on other carriers would have been far less.

Commonwealth funding would also reduce the commercial incentive to become a CUSP, as other carriers would then have no USO debt that would be reduced as a result of becoming a CUSP. Consequently, the prospect of a CUSP registering in a USO contestability area would be enhanced by a carrier funding arrangement.

## Appendix 1: costing the USO

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The Bellcore cost proxy model formed the basis of Telstra's September 1998 claim for reimbursement of \$1.8 billion in USO losses that Telstra estimated it incurred in 1997/98.<sup>65</sup> This represented a sevenfold increase on its claim for \$251 million for the previous year.<sup>66</sup> The model used a 'green fields' approach, based on:

- the cost of building from scratch the most cost-efficient infrastructure to deliver the required service; and
- exclusive access to the USO subsidy.

This approach was agreed between the ACA, Optus, Telstra and Vodafone, and provided the foundation for the Minister to cap the USO amount. There was some disagreement about some of the data values used as inputs to the Bellcore model for calculating Telstra's losses in meeting its statutory universal service obligations. However, there was general industry consensus on the conceptual approach.

Following the lodgement of Telstra's claim, the government moved swiftly to cap the USO amount for 1997/98, saying that:

If the Government had not acted, the industry would be facing great instability due to this threat of a massive increase in its USO contributions<sup>67</sup>

The claim triggered lengthy debate centred on the validity of the Bellcore model and the value of the data input to the model. Predictably, key protagonists in the debate lined up according to whether they had a net USO credit (Telstra) or a net USO debit (Vodafone, Cable & Wireless Optus, AAPT, Hutchison and other carriers), with the former supporting a high value for the total USO amount and the latter arguing for a reduction in the total USO amount.

Following an extensive consultation process that lasted more than a year, the ACA released its

final assessment of the Telstra claim, estimating it to be \$540 million in the absence of a cap.<sup>68</sup> It said that the difference between this amount and the original Telstra claim of \$1.8 billion was primarily due to the ACA using a lower opportunity cost of capital and taking into account a wider range of technologies. It also noted that Parliament had capped the USO amount at \$253 million.

The debate about USO costs did not stop at this point. Further work undertaken by the ACA, including another full round of industry consultation, resulted in the ACA assessing the USO amounts for each of 1998/99 and 1999/2000 to be \$280 million.<sup>69</sup> This reduction from \$540 million for 1997/98 was a consequence of reducing technology costs and a lower opportunity cost of capital.

Later, the ACA determined new USO subsidy amounts to apply in USO contestability pilot areas.<sup>70</sup> In this determination the ACA assumed the existence of viable competition, non-exclusive access to the USO subsidies and therefore higher business risk.

Some 12 years after the BTCE was originally engaged to estimate the losses incurred in meeting universal service obligations, the USO subsidy evolved from being a cost-based reimbursement of losses to being an incentive to carriers to supply services in a contestable market.

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<sup>65</sup> Senate Committee on Environment, Communications, Information Technology and the Arts, *Report on Telecommunications Laws Amendment (Universal Service Cap) Bill 1999*, Canberra, 29 April 1999.

<sup>66</sup> 'Telecommunications Universal Service in Australia', ACA Media Release No. 1 of 1998, 7 January 1998.

<sup>67</sup> 'The universal service obligation cost', Ministerial media release, 12 October 1998.

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<sup>68</sup> 'ACA final assessment of Telstra's Universal Service Obligation claim', ACA Media Release No. 63, 22 October 1999.

<sup>69</sup> 'Government USO decisions break new ground', Ministerial media release, 23 March 2000.

<sup>70</sup> 'USO contestability pilot subsidies announced', Ministerial media release, 19 April 2001.





## Appendix 2: a digital data capability

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In December 1996 the STSRG recommended that:

The digital data capability should be provided through the operation of the market throughout most of Australia. Where the market does not operate to make this capability reasonably accessible to all people in Australia on an equitable basis, it should be provided through the USO mechanism.<sup>71</sup>

In a dissenting report, one member of the Review Group (Professor Henry Ergas) argued that a digital data service should not be mandated, due to the cost and lack of evidence of substantial demand:

...the question must then be whether the likelihood that the benefits which would flow from prescribing the service would outweigh the associated costs . . . the material advanced [in the Report] is clearly inadequate to the task. In effect the report greatly overstates the likely benefits of prescription, while even more greatly under-stating its costs.<sup>72</sup>

In response to these reports, the Government chose not to include explicit reference to a digital data requirement in the *Telecommunications Act 1997*, which defined the standard telephone service as a service for the purpose of voice telephony. This definition took effect on 1 July 1997. A 2.4 kbps digital data requirement arose, however, from the ACA's 'End-to-end Network Performance Standard', which also applied as at 1 July 1997.<sup>73</sup>

Consumer pressure kept this issue alive, and in 1998 the Minister announced that the ACA would conduct an official review into whether the USO should be upgraded to include a digital data capability.<sup>74</sup> The ACA reported on its review in August 1998, finding that any further intervention by government in relation to the provision of a 64 kbps digital data service was

not economically necessary or justifiable. The basis for this conclusion was that:

ISDN or broadly comparable 64 kbps digital data services will be accessible to all people in Australia by the end of 1998 through Telstra meeting its licence condition and its proposed satellite based delivery system.<sup>75</sup>

The Parliament then passed legislation requiring Telstra to make a general digital data service (a 64 kbps ISDN-equivalent service) available on demand to 96 per cent of the population. In addition, Telstra and some other carriers were required to make a special digital data service (based on asynchronous satellite delivery) available on demand to the remaining 4 per cent of the population.<sup>76</sup>

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<sup>71</sup> Standard Telephone Service Review Group, December 1996, p. 12.

<sup>72</sup> Minority report by Henry Ergas, 'Review of the Standard Telephone Service', Department of Communications and the Arts, Canberra, December 1996, pp. 177-78.

<sup>73</sup> ACA, 'Net Universal Service Cost Assessment for 1997-98', AGPS, Canberra, October 1999, p56.

<sup>74</sup> 'Digital Data Review', Ministerial media release, 6 May 1998.

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<sup>75</sup> 'Digital Data Review', Ministerial media release, 18 August 1998.

<sup>76</sup> 'Senate approves better rural phone services, consumer protection and telecommunications competition', Ministerial media release, 22 June 1999



## Appendix 3: Networking the Nation<sup>77</sup>

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The Networking the Nation (NtN) program was established as a \$250m fund over 5 years beginning in 1997/98. Its objective is to assist the economic and social development of regional, rural and remote Australia by funding projects which:

- enhance telecommunications infrastructure and services in these areas;
- increase access to, and promote use of, services available through telecommunications networks; and
- reduce disparities in access to such services and facilities.

An additional \$171m in social bonus funding was provided from 1999/2000 for initiatives including:

- the Local Government fund (\$45m) to assist local government authorities in regional Australia to provide online access to information and services including the Internet;
- Building Additional Rural Networks (BARN) (\$70m) to promote ongoing, sustainable improvements in regional telecommunications services;
- the Internet Access fund (\$36m) to stimulate Internet service delivery in regional and rural Australia; and
- the Remote and Isolated Islands fund (\$20m) to improve telecommunications access for remote island communities.

The program is application-based and is designed to respond to the telecommunications priorities identified by communities in rural, regional and remote Australia. The program has funded a wide range of projects including:

- Internet services;
- mobile telephone services;
- community access facilities;
- telecentres;
- training and technical support;
- infrastructure planning and investment;

- electronic commerce; and
- videoconferencing facilities.

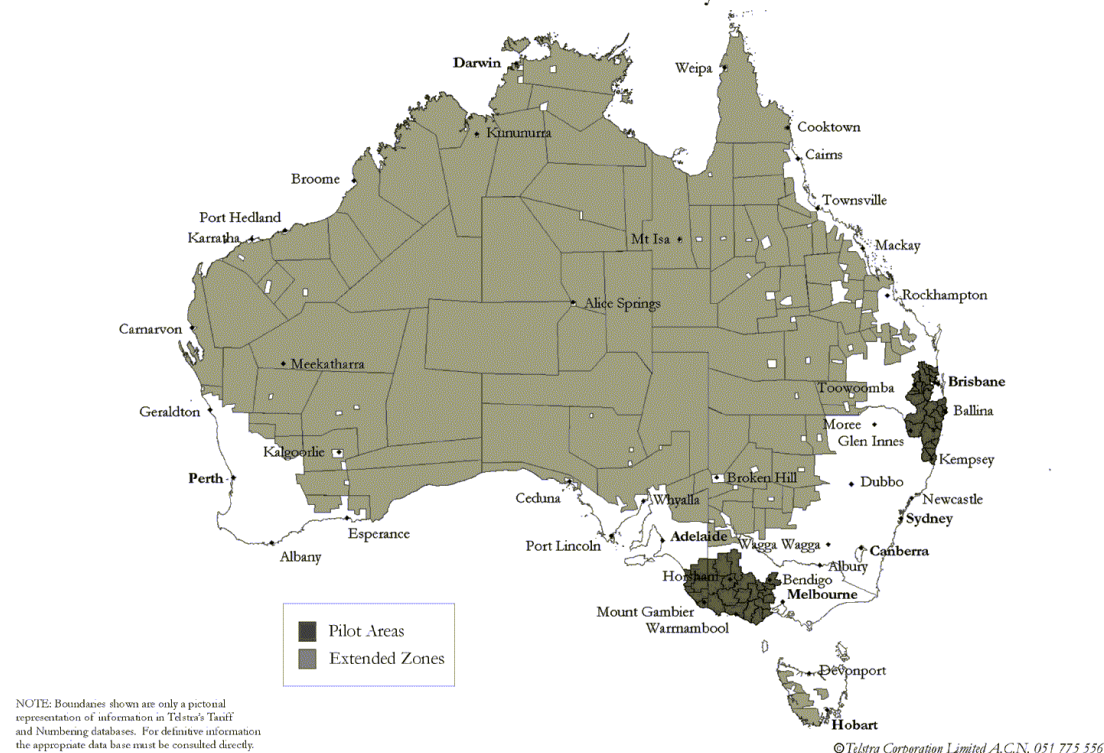
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<sup>77</sup> This summary is based on an address by David Williamson, General Manager, Networking the Nation, Department of Communications, Information Technology and the Arts, to the Regional Communications Forum, Canberra, 14 – 15 May 2001.



## Appendix 4: regulated contestability

Extended Zones and USO Contestability Pilot Areas



### 1. Extended Zones tender

In March 2000 the Government invited competitive tenders for a \$150 million project to extend untimed local call access to all Australians. Proposals were sought for the installation of new communications infrastructure in the Extended Zones, which cover 80 per cent of the Australian land mass.<sup>78</sup>

In return for \$150 million, and exclusive access to the USO subsidies in the Extended Zones for three years (set at around \$35 million per annum), the successful tenderer was required to commit to providing untimed local calls to the 40,000 subscribers in the Extended Zones, while maximising other benefits such as improved data rates for the internet, additional services includ-

ing television, lower prices and improved quality of service.

If Telstra was not the successful tenderer it could still choose to continue to offer services in the region and to compete against the successful tenderer, leaving the option open for contestable supply of services.

### 2. USO contestability pilots

In March 2000, the government also announced that it would undertake two regional contestability pilots,<sup>79</sup> introducing competition into the delivery of the universal service obligation as a means of improving telecommunications service quality and standards in regional Australia.<sup>80</sup>

<sup>78</sup> 'Call for tenders for \$150 Million social bonus project', Ministerial media release, 23 March 2000.

<sup>79</sup> Regions on the South Australia/Victorian border, and on the NSW/Queensland border – with USO subsidies worth approximately \$37 million per annum.

<sup>80</sup> 'Government USO decisions break new ground', Ministerial media release, 23 March 2000.

## Rural telecommunications

The key elements of the USO Contestability scheme are:

- Telstra is the Primary Universal Service Provider (PUSP), with the obligation to provide the standard telephone service in each area.
- Any other carrier can register with the ACA to be a Competing Universal Service Provider (CUSP), delivering an Alternative Telecommunications Service (ATS) in an area. A CUSP can withdraw from an area.
- Telstra can register to provide an ATS in an area.
- An ATS does not have to include an un-timed local call option.
- A CUSP has an obligation to supply its ATS on request to any customer in the area in which the CUSP is registered.
- For each customer registered with a CUSP, the CUSP receives a nominated USO subsidy.

Customer demand is a key factor in determining the commercial viability of a CUSP, as the CUSP must offer an ATS sufficiently above minimum requirements to attract a customer to churn from Telstra. In uncontested areas, the customer has no service choice and Telstra has little commercial incentive to supply more than the minimum requirements.

## Appendix 5: attracting competition into a USO market

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A telecommunications carrier is unlikely to register as a CUSP in a USO market unless it considers it to be a commercially attractive opportunity. This is unlikely to occur when the USO subsidy for the standard telephone service in the area is less than the loss incurred in providing that service.

In the event that there is no registered CUSP in an area, the government can increase the USO subsidy to attract a carrier to register as a CUSP. This action would be based on the assumption that the subsidy is too low to attract a new market entrant and, as a consequence, Telstra is funding an inequitable proportion of the losses it incurs in meeting its PUSP obligations.

For example, assume:

- a USO contestability market of 20,000 customers;
- a USO subsidy of \$500 per customer;
- a loss incurred in supplying the USO service of \$575 per customer;
- total eligible revenue for Australia of \$20 billion;
- Telstra with an eligible revenue of \$15 billion (75 per cent of total);
- Optus with an eligible revenue of \$3 billion (15 per cent of total); and
- a regional telco with an eligible revenue of \$100 million (0.5 per cent of total);

then

- the USO credits for that market claimed by Telstra will be \$10 million;
- the USO levy for that market for Telstra, Optus and the regional telco will be \$7.5 million, \$1.5 million and \$0.05 million respectively;
- the cost to Telstra of supplying the service will be \$11.5 million;
- the net cost to Telstra will be \$9 million (\$7.5m + \$11.5m - \$10m);
- the net cost to Optus will be \$1.5 million; and
- the net cost to the regional telco will be \$0.05 million.

### Now compare the following scenarios:

1. The USO subsidy is increased by 10 per cent to \$550.
  - this increase will cost Optus \$0.15 million (20,000 x \$50 x 15 per cent);
  - the increase will cost the regional telco \$0.005 million (20,000 x \$50 x 0.5 per cent); and
  - the increase will result in a net benefit to Telstra of \$0.25 million (20,000 x \$50 x 25 per cent).

This outcome will benefit Telstra and increase the costs of all other carriers.

2. The regional telco elects to register as a CUSP in the market before the subsidy is increased to \$550, and wins 5 per cent of the USO market (1,000 customers).
  - there will be no change in Optus' USO levy;
  - servicing 1,000 carriers will cost the regional telco \$0.575 million (1,000 x \$575);
  - the regional telco will claim a USO credit of \$0.5 million (1,000 x \$500);
  - the net increase in cost to the regional telco will be \$0.075 million (\$0.575m - \$0.5m);
  - servicing 19,000 customers will cost Telstra \$10.925 million (19,000 x \$575);
  - Telstra will claim a USO credit of \$9.5 million (19,000 x \$500);
  - the cost to Telstra resulting from the regional telco entering the market will be \$8.925 million (\$10.925m - \$9.5m + \$7.5m); and
  - the net benefit to Telstra will be \$0.075 million (\$9m - \$8.925m).

Scenario 1 might be preferred by Telstra (a net benefit of \$250,000 compared to \$75,000) and the regional telco (a net cost of \$5,000 compared to \$75,000). Optus, however, might be expected to prefer scenario 2 (no increase in costs compared to a \$150,000 increase).

There is therefore a commercial incentive for Optus to encourage the regional telco to register as a CUSP in the market to prevent an increase in the USO levy. For instance, Optus could pay \$75,000 to the regional telco if it registered as a

CUSP. In such circumstances, Optus would incur an increase in costs of \$75,000 compared to an increase of \$150,000 and the regional telco would experience no increase in costs.

This cost sharing is similar in principle to that in the USO arrangements, except that the cross subsidies are negotiated directly between interested carriers without recourse to a cost-proxy model or a centrally administered levy scheme applied to all carriers.

A risk for Optus would be that the regional telco would only register as a CUSP after an increase in the USO subsidy. If, however, Optus could negotiate a payment in exchange for transferring its USO levy debit for the area to the regional telco, then the commercial risk for Optus would be reduced. The regional telco would want to avoid the net increase in its USO levy debit that would result if the USO subsidy amount were to be increased. A pre-requisite for this would be that USO levy debits are tradable.

The regional telco is in a unique position, as the loss incurred in winning 5 per cent of the market (\$75,000) is far less than the cost to Optus of an increase in the USO subsidy (\$150,000). The reverse, however, does not apply. The loss incurred by Optus in winning 5 per cent of the market (\$75,000) is far more than the cost to the regional telco of an increase in the USO subsidy (\$5,000).