

The Parliament of the Commonwealth of Australia

Poles Apart

Telecom's zonal and charging policies in rural and
remote areas

Report from the House of Representatives
Standing Committee on Expenditure

November 1986

Australian Government Publishing Service

Canberra 1986

© Commonwealth of Australia 1986
ISBN 0 644 05611 8

Members of the Committee

- Chairman:** Mr J.G.Mountford, M.P.
- Deputy Chairman:** Hon. I.B.C.Wilson, M.P.
- Members:** Mr J.H.Beale, M.P.
Mr R.J.Brown, M.P.
Mr M.R.Cobb, M.P.
Mr D.B.Cowan, M.P.
Ms W.F.Fatin, M.P.
Mr R.V.Free, M.P.
Mr D.P.Hawker, M.P.
Mrs R.J.Kelly, M.P.*
Mr J.V.Langmore, M.P.
Mr L.B.McLeay, M.P.
Mr S.P.Martin, M.P.
Mr D.W.Simmons, M.P.
Mr P.N.Slipper, M.P.
Mr W.L.Smith, M.P. (from 2.6.86)
Mr C.W.Tuckey, M.P. (until 2.6.86)
- Secretary:** Mr M.E.Aldons (from 8.9.86)
Mrs S.M.Harlow (until 1.9.86)

Members of the Sub-committee

- Chairman:** Mr D.W.Simmons, M.P.
- Members:** Mr R.J.Brown, M.P.
Mr M.R.Cobb, M.P.
Mr D.B.Cowan, M.P.
Ms W.F.Fatin, M.P.

Mr R.V.Free, M.P.
Mr D.P.Hawker, M.P.
Mr S.P.Martin, M.P.
Mr J.V.Langmore, M.P.
Mr L.B.McLeay, M.P.
Mr J.G.Mountford, M.P.
Mr P.N.Slipper, M.P.
Mr W.L.Smith, M.P. (from 2.6.86)
Mr C.W.Tuckey, M.P. (until 2.6.86)
Hon. I.B.C.Wilson, M.P.

Inquiry Staff:

Mrs S.M.Harlow
Ms D.Miles
Mrs A.Hazelton
Mr A.Scott
Mr P.Hamburger
Mr P.Ratas
Miss P.Maher

* The nominee of the Chairman of the Joint Committee of Public Accounts who, in accordance with Clause (2) of the resolution of appointment, is a member of the Expenditure Committee.

Foreword

This report is the result of the second phase of the Committee's inquiry into Telecom's zonal and charging policies. It follows the Committee's first phase report, *Ringling in the Changes*, tabled in the House of Representatives more than two years ago. The length of time between the tabling of the two reports should give an indication of the extensive nature of this inquiry.

The Committee sincerely appreciates the efforts of more than 600 individuals and organisations who either made submissions to the inquiry or appeared as witnesses. As well, the Committee thanks the hundreds of people throughout rural and provincial Australia who attended the many public meetings held during the course of the inquiry. The Committee is particularly grateful to the Telecom project team, headed by Mr John Taylor, who attended the many public meetings held during the course of the inquiry. Their co-operation and willing assistance was most appreciated.

As Chairman of the Sub-committee, I thank my fellow members. The report details the extent of the Committee's travel throughout Australia and reinforces the fact that the Committee was genuine in its aim to make first hand inspections and hear directly from concerned individuals and organisations.

During the course of the inquiry, the Committee was capably guided by the then Secretary, Mrs Sue Harlow. Mrs Anne Hazleton and Ms Dorothy Miles provided valuable organisational and research assistance in a very supportive role. Mr Peter Hamburger's drafting skills in the final stage of preparation of the report were also appreciated.

I trust that the report will provoke a great deal of interest in the area of Telecom's operations in rural and provincial Australia.

David Simmons MP
Sub-committee Chairman

Contents

| | |
|--|-----------|
| Recommendations | x |
| 1 Background to Phase I and Phase II of the Inquiry | 1 |
| Phase I | 1 |
| The Inquiry Highlights | 2 |
| The Committee's Findings | 3 |
| Phase II | 3 |
| Submissions | 5 |
| 2 Background to Telecom's Zonal and Charging Policies | 8 |
| Pre 1960 — Evolution of the Existing charging Policies and zonal | |
| Boundaries | 8 |
| Community Telephone Plan | 10 |
| Charging by Distance | 11 |
| 1979 Review | 11 |
| Community Access 80 | 12 |
| Countrywide Calling | 13 |
| Tariff Variations Since Countrywide Calling | 15 |
| Summary | 17 |
| 3 The Mornington Peninsula — An Unresolved Facet of Phase | 19 |
| a. I | |
| Background | 19 |
| Action By Telecom in Response to the Phase I Recommendations | 20 |
| Conclusion | 23 |
| 4 The Service Centre Issue | 25 |
| Background | 25 |
| Criticisms and Concerns | 25 |

| | |
|--|-----------|
| Telecom's Response | 28 |
| Committee Findings and Recommendations | 31 |
| 5 Countrywide Calling | 34 |
| Introduction | 34 |
| Zonal Principles | 35 |
| Location of Exchanges | 37 |
| Nomenclature | 39 |
| Summary of Criticisms and Concerns (Zonal Principles) | 39 |
| Call Charging Principles | 40 |
| Rationale for Countrywide Calling | 42 |
| Committee's Findings and Recommendations | 43 |
| 6 The Rural and Remote Areas Program (RRAP) | 47 |
| Background | 47 |
| Replacement of Plant and Equipment | 50 |
| History of the Provision of Lines for Rural and Remote Telephone Subscribers | 51 |
| The Present Position | 53 |
| Manual Automatic Interface (MAI) Equipment | 53 |
| Other Problems with Conversion of PPE Lines | 55 |
| Telecom's Response to the Criticisms and Comments | 56 |
| The Committee's Findings | 57 |
| Technological Options | 58 |
| Underground Telephone Cables | 59 |
| Analogue Radio Concentrator System (ARCS) | 59 |
| Single Channel Analogue Radio System (SCARS) and Small Ca- pacity Radio Systems | 60 |
| Digital Radio Concentrator System (DRCS) | 60 |
| National Communications Satellite | 61 |
| Telecom's Technological Choice | 62 |
| 7 Telecom's Pricing Policy | 65 |
| National Uniform Pricing Policy | 65 |
| How Big is the Cross-Subsidy? | 67 |
| The Economic Case for Cross-subsidisation | 68 |
| The Social Arguments for the Cross-subsidy | 70 |
| Control of Cross-subsidies | 71 |
| Cross-Subsidy Involving Data Transmission | 74 |

| | |
|--|-----------|
| Charging by Distance and Time | 76 |
| The Future of Cross-subsidies to the Rural and Remote Sector . . . | 76 |
| 8 Telecom and the Public | 77 |
| Responsiveness to Community Needs | 77 |
| Billing Arrangements | 84 |
| Appendix I | |
| Appendix II | |
| Appendix III | |
| Appendix IV | |
| Appendix V | |
| Appendix VI | |
| Appendix VII | |
| Appendix VIII | |
| Appendix IX | |
| Appendix X | |
| Appendix XI | |

List of Tables

| | | |
|-----|---|----|
| 2.1 | Charging Distance Steps — October 1973 | 11 |
| 2.2 | STD Day Rates — Charge For 3 Minutes | 15 |
| 2.3 | Additional Revenue From Notified Tariff Changes | 17 |

Recommendations

Recommendation 1: Service centres under the Community Access (CA80) Scheme should be defined as centres providing access to the following minimum services:

- (a) medical services comprising at least one doctor;
- (b) prescription dispensing facilities;
- (c) schooling to at least primary level;
- (d) general provisions (meat, groceries, etc);
- (e) banking facilities;
- (f) service station facilities (fuel, lubrication and basic repairs);
- (g) postal services;
- (h) agricultural service facilities.

Recommendation 2: Telecom should continue to review cases where designated service centres are disputed by residents and negotiate with residents who still reject the service centre to which they have been allotted.

Recommendation 3: Telecom should review the decisions relating to those service centres which barely qualified as such in 1980 according to the required criteria. The review should determine whether since 1980 there has been any further withdrawal of commercial or community facilities to the extent that the town can no longer fulfil the requirements of a service centre. If the determination shows there has been such a withdrawal, Telecom should reverse its initial decision and offer an alternative and more suitable service centre.

Recommendation 4: Subscribers currently eligible for 'C' rate calls to their local service centre under Countrywide Calling in extended zones

should be given untimed local call access in lieu but Telecom should resist flow-on of this concession to other groups.

Recommendation 5: Telecom should provide the 008 service on a regional basis.

Recommendation 6: Telecom should institute a review process, in conjunction with local government authorities, to overcome any problems that have arisen in the naming of extended zones.

Recommendation 7: Telecom should make a further concession based on the time interval on charges for calls within the same extended zone or to a service centre.

Recommendation 8: Telecom should examine the anomalies caused by the elimination of some standard zones to determine whether some relief can be offered to customers in these cases.

Recommendation 9: Telecom should extend to rural and remote areas the concession being given in metropolitan areas with replacement of 'A' and 'F' rates by 'C' rates of charge within Capital City Greater Charging Districts.

Recommendation 10: Telecom should discuss proposed changes to zonal and charging policies with customers who might be affected prior to their implementation.

Recommendation 11: Telecom should show flexibility during the consultation process, and, where possible, offer alternative zoning arrangements which will more adequately reflect customer needs within the bounds of existing zonal principles and financial constraints.

Recommendation 12: Telecom should continue to replace all Manual Automatic Interface (MAI) equipment as quickly as possible.

Recommendation 13: Upon conversion from Part Privately Erected (PPE) lines to an automatic exchange, Telecom should assess, on an individual basis, the conversion costs for customers who have previously installed and maintained their own PPE lines. Telecom's adjusted cost should reflect the contribution made by the customer towards the installation and maintenance of their PPE line on a pro-rata scale commencing from 1969.

Recommendation 14: Outstanding applications for additional services made by customers converting from manual PPE lines to an automatic system should be treated as existing rather than new applications for the purposes of determining the connection fee.

Recommendation 15: Telecom should examine the anomaly under which customers previously connected to PPE lines were diverted from their historical exchange to another exchange upon conversion to the automatic exchange system, thereby losing untimed local call access to their historical local exchange, service centre and/or community of interest, with a view to offering a mutually acceptable solution.

Recommendation 16: Telecom should resolve the problems relating to the Analogue Radio Concentrator System raised during the course of the inquiry.

Recommendation 17: Telecom should co-operate closely with State and Territory Governments and with relevant non-government organisations to ensure that the telecommunications network is capable of playing an appropriate part in meeting the social and educational needs of rural and remote communities. In particular, Telecom should explore the potential of 'hybrid' or other systems to advance the program of delivery to remote communities in the Northern Territory so as to provide them with a reliable telephone system by December 1988.

Recommendation 18: Telecom should produce its district profitability study on an annual basis for inclusion in its Annual Report. This information should provide details of district revenues, direct expenses, indirect expenses and a summary of the allocation rules used to apportion the indirect costs.

Recommendation 19: When restructuring its tariffs, Telecom should assess the distributional and overall social impact of its measures and report to the Parliament on the results.

Recommendation 20: Telecom should investigate possible ways of overcoming exploitation of the switched network by data users.

Recommendation 21: Telecom should examine the factors on which its pricing policy as it applies to long distance charges is based with a view to giving full consideration to the decreasing importance of distance.

Recommendation 22: Telecom should reaffirm its policy of cross-subsidising the rural and remote sector.

Recommendation 23: Telecom should disseminate information on its policies, practices, procedures and corporate objectives, as well as the philosophies behind them, down to field level. This should aim to ensure that Telecom staff and customers are fully informed. Telecom management should be proactive in seeking opportunities to communicate directly with customers and communities affected by Telecom activities.

Recommendation 24: Telecom should present its marketing, advertising and information material in an accurate and simplified way.

Recommendation 25: Telecom should test in the market place, before large scale distribution, any publication it intends to distribute to customers to explain changes in zonal and charging policies so as to avoid misinterpretation and confusion.

Recommendation 26: Telecom should give urgent attention to simplifying the call charging information shown in District Telephone Directories.

Recommendation 27: Telecom should act urgently on the Committee's earlier recommendation that it establish a Complaints Bureau in each State to receive and respond to customer problems and that the Complaints Bureau be clearly identified in telephone directories.

Recommendation 28: Telecom should undertake social research into the telecommunications needs of special groups in rural and remote areas on an ongoing basis, so as to take the social needs of these customers into account when developing zonal and charging policies.

Recommendation 29: Telecom should provide welfare organisations which do not generate high volumes of traffic with access to a suitable coin telephone on a leased basis.

Recommendation 30: Telecom should place more emphasis on improved customer relations and public image through improving its marketing and social research and by disseminating its policies and corporate goals through all levels of its structure.

Recommendation 31: Telecom should, on an optional basis, introduce to all customers, including those in rural and remote areas, the facilities of Subscriber Trunk Dialling Call Charge Record and International Subscriber Dialling Call Charge Record as soon as practicable.

Recommendation 32: Telecom should provide free of charge to all customers, the facility of Three Tier Metering when it has been technically proven.

Recommendation 33: Telecom should research, develop, and make available on an optional basis, a Telephone Information Management System to provide single-line users with access to information such as date, time, duration and number called in respect of all calls from their service.

Chapter 1

Background to Phase I and Phase II of the Inquiry

Phase I

1.1 On 7 February 1984, Phase I of the Telecom inquiry began when the Committee resolved to inquire into Telecom's zonal and charging policies as they applied to capital and large provincial cities. A Subcommittee, chaired by Mr Ross Free, M.P., took evidence and carried out inspections over the next seven months. The inquiry culminated with the tabling of a report entitled *Ringling In the Changes*¹ on 4 October 1984. The terms of reference for Phase I were as follows:

To inquire into and report on:

- (1) Telecom's charging policies in capital and provincial city areas;
- (2) the rationale for the establishment of the existing pattern of charging zones;

¹Australia, Parliament, *Ringling in the Changes: Telecom's Zonal Charging Policies, a Report from the House of Representatives Standing Committee on Expenditure*, Parl. Paper 226, Canberra, 1984

- (3) the extent and distribution of population growth in metropolitan and provincial areas since the existing charging zones were established;
- (4) the adequacy of Telecom's response to these patterns of growth;
- (5) the social and economic consequences of (4) above;
- (6) appropriate action to ameliorate any adverse social and economic consequences; and
- (7) other matters as the Committee decides in the course of the inquiry.²

The Inquiry Highlights

1.2 To keep the inquiry within manageable proportions, the Committee chose to focus on the existing charging policies covering 26 selected capital and larger provincial cities. These areas were selected on the basis that the population in each selected city approximated to a minimum of 50 000 people. The selected cities included approximately 74% of Australia's population.³

1.3 During Phase I of the inquiry, the Committee realised that charging and zonal policies for metropolitan and provincial cities could not be viewed in isolation from those for the rural community. The Committee therefore took the opportunity in the course of its public hearings to invite representatives from rural organisations to present their views. The views expressed to the Committee by the various rural organisations, formed the basis for Phase II, and showed considerable dissatisfaction among country people with Telecom's charging policies in rural areas as well as with the level and quality of the service available. Customers in rural and remote areas believed they had special telephone needs because of their geographic location and isolation. In response to this, the Committee undertook to conduct a

²ibid. , p. 1.

³ibid. , p. 2.

second phase of the inquiry to review the claims of rural and remote telecommunications users.

The Committee's Findings

1.4 The Committee found in Phase I that Telecom had not been sufficiently responsive to the needs of the Australian metropolitan and large provincial city communities. The Report contained 23 recommendations which, in the Committee's view, would make Telecom charging policies in metropolitan areas equitable, consistent with its statutory obligations and adequately responsive to community needs. Appendix I contains a full list of these recommendations.

1.5 In October 1985, the Government responded to the Committee's report. A summary of the response is included at Appendix II. The Government, and Telecom, had accepted many of the 23 recommendations made by the Committee, but indicated that the need for financial responsibility and customer equity meant that not all could be fully implemented. Appendix III details the current status of the response to the Phase I recommendations and the progress towards implementation.

Phase II

1.6 Phase II of the Telecom inquiry began on 20 March 1985. On that date the Committee resolved to follow on from Phase I with an inquiry to report on:

- Telecom's zonal and charging policies in rural and remote areas, and the social and economic consequences of these policies;
- the most cost-effective provision of telecommunications and associated services in rural and remote areas, and
- other matters as the Committee decides in the course of the inquiry.

A Sub-committee, chaired by Mr David Simmons, M.P., was appointed to conduct the inquiry.

1.7 In May 1985, the Committee advertised nationally inviting submissions. Six hundred submissions were received from both individuals and organisations representing a diverse range of interests, including, industry, local, State and Territory Governments, agriculturalists, parents' associations, telephone users' associations, welfare associations, progress associations and small business owners. An index of submissions is contained in Appendix IV.

1.8 The Sub-committee felt at that time that the inquiry presented two distinct tasks: to review Telecom's zonal and charging policies, as they applied to rural and remote areas including the social and economic consequences flowing from them; and to examine the existing and proposed telecommunications and associated services available to rural and remote subscribers and determine their cost-effectiveness.

1.9 The factors that had to be considered were more numerous and wide-ranging than those considered in Phase I for a number of reasons:

- the problems raised by the residents in rural and remote areas are based on the distance factor, the technological attempts to overcome the distance factor, and zonal arrangements, and in this regard they differ from the concerns of metropolitan telephone subscribers;
- there are significant areas of Australia which still do not have access to a basic telephone service;
- for those with current access, the quality of the service is often poor, and
- services required by the mining and exploration sector differ substantially from those required by the average metropolitan business customer.

Submissions

1.10 The 600 submissions received during the course of the inquiry raised a number of common complaints. One major area of dissatisfaction arose with residents who, although located outside the capital city local call zone tended to regard themselves as metropolitan customers. For example those living at Wyong or the Blue Mountains, near Sydney or on the Mornington Peninsula near Melbourne. These areas are heavily settled by people in the older age groups, on fixed incomes, who are afraid of incurring high charges. They are highly dependent on the telephone for social contact. They find it difficult and expensive to contact a business or a government department in the capital city. Further, the line congestion in and out of these areas fosters the impression that they are being charged the same prices as their city counterparts but for an inferior service. Although these complaints were addressed during Phase I, they also arose in Phase II, especially in relation to the Mornington Peninsula.

1.11 A second major group of complaints came from rural and remote residents. Many of these expressed considerable dissatisfaction with aspects of Telecom's service which had affected them personally, such as:

- the Countrywide Calling Scheme;
- high calling and service charges;
- the irrelevance of the 32 kilometre limit boundary to rural and remote residents;
- the loss of local call access to their traditional exchange, to other customers on the same exchange and to their 'service centre', and
- the diversion of their service to another exchange without satisfactory prior consultation, sometimes resulting in an increase in call charges to their traditional commercial centre or 'service centre'.

1.12 Other submissions focused on broader issues such as:

- Telecom's national pricing policy and cross-subsidisation;
- customers need for more billing information and the requirement to be able to monitor and check personal phone usage,
- requirement for price concessions for welfare groups, educational institutions and libraries;
- requirement for cheaper land line facilities;
- Telecom's choice of technology to deliver telecommunications and associated services to rural and remote areas;
- requirement for greater utilisation of satellite technology by Telecom;
- the introduction of timed local calls, and
- the effect of Telecom's high charges on Federal and State Government decentralisation programs.

1.13 Between June 1985 and 28 July 1986, the Sub-committee held numerous inspections, public hearings and public meetings. A total of 97 exhibits were received during this phase of the inquiry. A list of exhibits is contained in Appendix V. Public meetings were held in:

| | |
|-----------------------|------------------|
| Hughenden, Qld | - 2 October 1985 |
| Richmond, Qld | - 2 October 1985 |
| Charleville, Qld | - 4 October 1985 |
| Armidale, NSW | - 25 March 1986 |
| Hamilton, Vic | - 2 April 1986 |
| Bendigo, Vic | - 3 April 1986 |
| Flinders Island, Tas. | - 28 July 1986 |

1.14 A wide variety of interested individuals and organisations throughout Australia were given the opportunity to put their views on Telecom's rural and remote zonal and charging policies to the Committee. The Committee received evidence from Commonwealth, State, Territory and local government authorities, academics, private individuals and various organisations.

1.15 Public hearings were held at:

| | |
|------------------|---------------------------|
| Darwin, NT | - 18 October 1984 |
| | - 24 October 1985 |
| Rosebud, Vic | - 14 August 1985 |
| Frankston, Vic | - 15 August 1985 |
| Rockhampton, Qld | - 1 October 1985 |
| Hughenden, Qld | - 2 October 1985 |
| Richmond, Qld | - 2 October 1985 |
| Longreach, Qld | - 3 October 1985 |
| Charleville, Qld | - 4 October 1985 |
| Perth, WA | - 21 October 1985 |
| Canberra, ACT | - 13 and 20 November 1985 |
| | - 28 and 29 May 1986 |
| Armidale, NSW | - 25 March 1986 |
| Hamilton, Vic | - 2 April 1986 |
| Bendigo, Vic | - 3 April 1986 |

A list of those who gave evidence at the hearings is contained in Appendix VI.

1.16 As is the usual Committee practice, the transcripts of evidence taken at public hearings and other evidence authorised for publication have been incorporated in a separate volume, which is available for inspection at the Committee Office of the House of Representatives or at the National Library.

Chapter 2

Background to Telecom's Zonal and Charging Policies

Pre 1960 — Evolution of the Existing charging Policies and zonal Boundaries

2.1 To understand the principles of Telecom's current zonal and charging policies, it is necessary to go back 30 years.¹ During 1956 the Director-General, Postmaster-General's Department, who was then responsible for telecommunications, established the Automatic Network and Switching Objectives (A.N.S.O.) Committee to develop firm proposals for:

- a National Numbering and Trunk Switching Plan with the ultimate objective of national subscriber trunk dialling;
- a development plan for the Sydney area to permit expansion within the framework of the National Plan; and
- a development plan for the Melbourne area to permit expansion within the framework of the National Plan.

¹The historical outline which follows is based on Submission No. 496, Telecom, June 1985.

The proceedings of the A.N.S.O. Committee show evidence of the complexity of the task and the interrelationships which existed between the many commercial, community and technical issues which had to be determined in order to achieve a customer controlled national automatic network at affordable prices.

2.2 For many years prior to 1960, exchanges within capital cities had been grouped so that all had a common charging basis and local call rates applied between them. In 1929 mainly because of population growth, the local call networks for Sydney and Melbourne were extended to a radius of 15 miles (24 km), with the other capitals remaining at 10 miles (16 km). The A.N.S.O. Committee considered that these networks should be retained as single charging zones. It also considered that zones should be introduced in the sub-metropolitan areas adjoining the capital city network zones, with local call access to the inner city zone.

2.3 In determining the size of zones a key factor at that time was that trunk calls over short distances, in the 5 to 20 miles (8 to 35km) range, cost significantly more to connect, particularly under manually controlled conditions, than the price of the call. The Committee considered that there were both economic and customer advantages to be gained by converting such calls to local rates and reducing the cost of connection. The Committee further concluded that zones should on average be about 150 sq. miles (380 sq. km) with scope for some variation either way.

2.4 In the case of metropolitan areas, it was felt that the balance of customer and economic interests could best be served by enclosing the inner zone by annular (or ring-like) zones approximately 16km wide averaging about 380 sq.km in area. In this way reasonable uniformity of treatment of customers was achieved.

2.5 In August 1959, a document entitled 'Progress-Policy-Plans' was tabled in Parliament by the Postmaster-General. It outlined some of the problems of communications in Australia and new policies for developing the telephone, telegraph and postal systems to meet the new objectives, particularly that of a fully automated Australia-wide telephone service.

Community Telephone Plan

2.6 The Community Telephone plan which evolved from the principles established by the A.N.S.O. Committee and the policies outlined in the document entitled 'Progress-Policy-Plans', formed the basis for the new numbering, charging and switching plans necessary to enable all customers to have access to a fully automatic national telephone system. Key elements of the plan which directly affected rural and remote customers were:

- exchanges were grouped into charging zones and charging zones grouped into charging districts;
- charging zones included, wherever possible, exchanges with a community of interest;
- zones on average were about 380 sq km (150 sq miles) in size;
- local call access was provided between exchanges in the same zone and adjoining zones;
- trunk charging within a district or adjoining districts was based on the distance between zone centres, and
- trunk charging from one district to a non-adjoining district was based on the distance between district centres.

2.7 Prior to the introduction of the Community Telephone Plan, local call access in country districts had been limited to calls between customers connected to exchanges up to 8km apart. However, after the introduction of the new zonal and charging principles in 1960, local call access became available to customers connected to exchanges within

the same and adjoining zones. Typically, this meant that customers at exchanges between 24km and 32km apart and a little further in some extreme cases, enjoyed local call access.

Charging by Distance

2.8 Distance steps for non-local call charging were set in kilometres in 1973.² Annular distances between district centres formed the basis of the charging code set out below. This table underwent a series of

Table 2.1: Charging Distance Steps — October 1973

| Rate | Distance |
|------|------------------|
| A | Up to 50 km |
| F | 50 km to 85 km |
| M | 85 km to 165 km |
| Q | 165km to 325 km |
| W | 325 km to 485 km |
| X | 485 km to 645 km |
| Y | Over 645 km |

changes in subsequent years as Telecom introduced new technology. The general effect of the changes being to reduce the importance of distance as a factor in charging.

1979 Review

2.9 Zonal and charging principles were reviewed in 1979, leading to the next major change to affect rural and remote customers, the Community Access 80 Scheme (CA80). The review 'established that the basic scheme was essentially sound and suitable', but that due to changes which had since occurred in the Australian community the zonal arrangements should be reviewed. The community changes identified by the review were:

²Submission No. 32 (Phase I), Telecom, p. 37.

- the declining importance of many smaller rural centres and the commercial facilities available at such centres;
- the increasing dependence of rural properties on larger service centres;
- the declining level of employment on rural properties, and
- the increasing urbanisation of rural areas surrounding capital cities.³

As a result of this review, Telecom introduced the Community Access 80 Scheme.

Community Access 80

2.10 The Community Access 80 Scheme (CA80), established in 1980, provided for modified charging principles to overlay the basic zonal and charging framework already established under the Community Telephone Plan. The new principles were designed to:

- meet community needs for lower cost communications in cases where an untimed local call was not available from rural properties and small communities to a centre which provided a reasonable range of services by providing a new community call, or 'C', rate of 16c for 3 minutes between these customers and a 'service centre';
- recognise the greater distances that separate communities in the more sparsely populated areas by placing a ceiling on STD call charges within a charging district and between adjoining districts, and
- provide a lower cost link between newly developed outer urban fringe areas and their parent capital cities, by providing a community call rate between all telephone exchanges in the zones directly adjoining the metropolitan outer zones and exchanges in the inner metropolitan zone.

³Submission No. 496, Telecom, Attachment 4, p. 1.

2.11 Concurrent with the implementation of CA80, the 325-485km and 485-645km charging rates were combined, with the whole new annulus chargeable at the lower rate. A major benefit of the CA80 Scheme for rural and remote customers was a lower cost of calls in cases where local call access was not available between customers' properties or small communities and their 'service centre'.

2.12 In summary, the benefits accruing to rural areas as a result of the introduction of CA80 were:

- rural customers gained both-way community call access at 'C' rate, ie 16c for 3 minutes, to a 'service centre';
- calls between many widely separated communities gained a maximum charging rate irrespective of distance. Calls made within a charging district were charged at the maximum 'M' rate of 96c for 3 minutes, ie the maximum rate which could apply to calls within a charging district was the 'M' rate, and for calls between adjoining charging districts the maximum was the 'Q' rate of \$1.44 for 3 minutes;
- amalgamation of the 'W' and 'X' rates and a charge reduction for 'M' rate calls during the night and economy rate periods, and
- extension of 'Q' rate over a chargeable distance of 165-745km and 'Y' rate (\$1.92 for 3 minutes) for distances exceeding 745km.

Countrywide Calling

2.13 A further change occurred with the introduction of the Countrywide Calling Zonal and Charging Scheme in October 1983. Its main purpose was to facilitate the provision and operation of modern telephone services in the more sparsely settled areas of Australia at a reasonable cost balance to customers and the community. In essence it was the vehicle which Telecom used to zone, for call charging purposes, many rural and remote parts of Australia which previously did not have a telephone system. The objectives underlying the scheme were to devise zonal and charging policies which would enable rural

and remote customers to have access to a greater number of other customers at a reasonable rate and to reduce the cost of implementation of the modernisation program so that funds could be released for use in other programs such as the Rural and Remote Areas Programme (RRAP).

2.14 The scheme resulted in much larger extended zones, the boundaries of which were determined as follows:

- customers within an extended zone were to share, as far as practicable, a community of interest;
- customers within an extended zone were to have access to a minimum of 500 other customers at a reasonably low call fee, and
- existing standard charging zones in the more densely populated areas were to remain essentially unchanged.

2.15 The call charging principles adopted for Countrywide Calling were as follows:

- calls between customers within an extended zone were charged at the community call or 'C' rate (16c for 3 minutes);
- calls between customers connected to and within a 32km radial distance of the same automatic exchange were charged at the local call rate (16c unit fee);
- customers served by part privately erected lines were regarded as being within 32km of an automatic exchange and charged accordingly if the point where Telecom and private line plant joined was within 32km. This concession recognised that customers of part privately erected services had, until conversion to an automatic exchange, provided and maintained a portion of the line at their own cost;
- calls between customers of the same manual exchange were charged at the local call rate in recognition that these customers did not receive the general benefits afforded by automatic services;

- calls between an extended zone and an adjoining zone were charged at a maximum of 'F' rate (58c for 3 minutes) with customers having access to at least 500 other customers at this or a lower rate;
- calls between an extended zone and a zone in which the designated 'service centre' for that extended zone was located were charged at the community call rate;
- calls between an extended zone and a non-adjoining zone within the same charging district were charged at a rate not exceeding 'Q' rate (\$1.44 for 3 minutes), and
- calls between an extended zone and any zone in a non-adjoining charging district were charged at a rate applicable to the radial distance between the centres of the charging districts concerned.

Tariff Variations Since Countrywide Calling

2.16 Since the introduction of Countrywide Calling in 1983, Telecom has twice gained Prices Surveillance Authority (PSA) approval for tariff variations to charging rates. Changes to the STD day rates since 1983, for example, can be summarised as follows:

Table 2.2: STD Day Rates - Charge For 3 Minutes

| Rate & Distance (km) | Rate Per 3 Minutes (\$) | | |
|----------------------|-------------------------|--------|--------|
| | 1.10.83 | 1.2.85 | 1.8.86 |
| Community Call | 0.15 | 0.160 | 0.18 |
| A 25-50 | 0.30 | 0.288 | 0.30 |
| F 50-85 | 0.60 | 0.576 | 0.60 |
| M 85-165 | 1.00 | 0.960 | 0.90 |
| Q 165-745 | 1.50 | 1.440 | 1.20 |
| Y 745+ | 2.00 | 1.920 | 1.80 |

There have also been consequent changes to STD evening rates, trunk changes etc.

2.17 Telecom officials cited two objectives when they proposed the most recent tariff variations.

to rebalance tariffs so as to more closely reflect costs and reduce dependency on the trunk call service revenue, and generate additional revenues so as to satisfy requirements for funding the capital programme in 1986-87 and counter-balance costs increases.⁴

The variations were approved as proposed, with Telecom claiming the following results:

- trunk call charges were reduced by approximately 9% on average and consisted of increases to short distance trunk call charges and reductions to long distance charges;
- discount rates for trunk call services and their time of application were altered in order to meet specific network utilisation objectives;
- business telephone rentals increased by approximately 4.5%;
- local telephone calls and community telephone calls increased by 2 cents to 18 cents;
- telegram charges increased by about 15% on average; and
- coin telephone charges increased from 20 cents to 30 cents for local calls and from 20 cents to 30 cents per meter pulse for STD and ISD calls.⁵

2.18 Telecom expects to generate an estimated \$46 million in additional revenue in 1986-87 and \$87 million in a full year from the above variations. The breakup of this additional revenue between the notified products is as follows:

2.19 For the rural and remote customer, the variations mostly represent additional concessions. In addition to concessions granted with the introduction of Countrywide Calling, calls in the 'M', 'Q' and 'Y' category have reduced in both actual and real (after inflation) terms. The 'A' and 'F' rates are currently the same in actual terms as

⁴ibid., p. 9.

⁵ibid., p. 46.

Table 2.3: Additional Revenue From Notified Tariff Changes⁶

| | 1986-87 \$m | Full Year Effect \$m |
|-----------------------------------|----------------|-------------------------|
| Trunk Calls ^(a) | -107 | -117 |
| Telephone Rentals ^(b) | 9 | 13 |
| Local Calls ^(a) | 133 | 145 |
| Telegrams ^(a) | 2 | 2 |
| Coin telephones ^{(a)(c)} | 9 | 44 |
| | 46 | 87 |

Notes:

- (a) Implementation date 1 August 1986
- (b) Implementation date 1 November 1986
- (c) Takes into consideration the progressive conversion of coin telephones.

in 1983, representing a real reduction when the effects of inflation are considered. 'C' rate call charges, on the other hand, have increased by 20% from 15 to 18 cents.

Summary

2.20 The group charging concept, which was established in 1960 when the Community Telephone Plan was adopted, created local call areas which resulted in about 40% of the short distance trunk calls throughout Australia at that time becoming local calls. From 1960 onwards modifications made to zonal principles, arising from issues raised by rural organisations and their representatives, saw many benefits going to rural and remote customers. Amendments were also made as a result of Telecom's strategies and internal planning processes. The first major modification occurred with the introduction of the Community or 'C rate' call in 1980, and the placing of a ceiling on the charge for STD calls within a charging district and between adjoining districts (CA80). The second major modification was the advent of 'Countrywide Calling' in 1983. Since 1983 Telecom has twice gained approval from the Prices Surveillance Authority for tariff variations to charging rates. A number of these variations have benefited rural and

remote customers.

2.21 The general effect of the changes has been to decrease the effect of distance on both the quality and the cost of telecommunications. Telecom's initiatives in this area reflect a world-wide trend in this direction.

Chapter 3

The Mornington Peninsula — An Unresolved Facet of Phase I

Background

3.1 The zonal and charging arrangements as they apply to communities located on the outskirts of metropolitan areas throughout Australia, such as the Mornington Peninsula near Melbourne, were the main subject of the Committee's Phase I inquiry and a full list of the Phase I recommendations is at Appendix I. However, because of the rural character of such areas, some of the concerns raised during Phase I were also considered in Phase II.

3.2 It must be noted however, that the concerns raised by the residents of these areas in both inquiries are significantly different from those raised by residents in the remote areas of the Northern Territory and western Queensland. The remote area problems are based on the distance factor, the technological attempts to overcome this and on zonal arrangements. The concerns of the Mornington Peninsula

residents, and others in similar situations, result only from the zonal arrangements.

3.3 During the course of Phase II, the Committee received a large number of submissions from residents of Mornington Peninsula, particularly from residents of retirement villages. The submissions drew attention to the following specific concerns:

- high charging rates;
- apparent inequities and anomalies in the zonal boundaries;
- the lack of a quality telephone service;
- the requirement for a cheap efficient telephone service, and
- long delays and problems in telephone connections.

3.4 In August 1985, when the Committee held public hearings and meetings at Frankston and Rosebud on the Mornington Peninsula, neither the Minister for Communications nor Telecom had responded to the Committee's Phase I report *Ringling In The Changes*. Therefore the problems raised in Phase I had not been fully addressed. Since then, however, Telecom has responded through the Minister for Communications, and considerable progress has been made in implementing the proposed changes.

Action By Telecom in Response to the Phase I Recommendations

3.5 In February 1986, the Secretary to Telecom informed the Committee that:

In regard to the operational issues raised at the [Phase I] hearings, quite extensive investigations have been carried out aimed at rectifying or alleviating the problems outlined.¹

¹Exhibit No. 67.

A full statement of the actions taken or proposed by Telecom together with explanatory data is contained in Appendix VII. The actions taken or proposed by Telecom can be summarised as follows:

- Proposals for future changes to zone boundaries in and around capital cities, contained in Telecom's response to Phase I of the inquiry, indicate that the 14,000 customers in the present Mornington (059) zone will have unit fee local call access to 254,000 customers in an expanded Dandenong (03) zone (ie. an increase of 167,000 customers on 18 additional exchanges).
- The Frankston District Telecommunications Manager publishes an informative article, 'On Line With Telecom', on a weekly basis in three local newspapers which have circulation over the Mornington Peninsula area. This medium will be used where possible in further endeavours to correct misunderstandings by some customers of call charging arrangements, particularly regarding calls between adjoining zones in proximity to the 03/059 boundary.
- The Frankston District Customer Services consultancy staff will also continue to take opportunities to advise customers, particularly those managing and residing in retirement villages, of call charging arrangements and of various Telecom products and services which may benefit them.
- Telecom is examining ways by which information concerning call charges and calling arrangements can be better presented in the information pages of telephone directories. In general, this will proceed in conjunction with Telecom's strategy aimed at the simplification of charging information. Also relevant is the proposed simplification of the call charging system itself so that it can be more easily understood by the public.
- The proposal for future changes contained in Telecom's response to Phase I of the inquiry indicates that customers located in the Mornington Peninsula will gain further by specific improved call charging arrangements. For instance, customers in the Mornington zone will gain by having 245,000 (approximately double the present number) of customers to call at the unit fee local call rate. Many of these are located closer to the city.
- Also, customers in the Rosebud zone will gain by having the community call rate charge on calls to and from very large outer

metropolitan centres such as Frankston and Dandenong, as well as to and from many suburbs such as Beaumaris, Cheltenham, Clayton, Heatherton, Springvale and Mordialloc which are closer to Melbourne (ie. many calls which previously cost 29c or 58c for 3 minutes will cost only 16c for 3 minutes).

- For those organisations and businesses which consider that their inclusion in the 059 telephone area acts as an impediment to their activities, a range of services and facilities are available. These include the 008 service, call diversion facilities, distant exchange line services and tie lines and outdoor extensions associated with PBXs and PABXs.
- Telecom promotes such facilities during its normal operations and also provides a consultancy service to help customers determine the most effective and economic arrangement for their needs. These consultancy services are available through Telecom's Business Offices and District Offices.
- In conjunction with the implementation of the zone changes proposed in Telecom's response to Phase I of the inquiry, Telecom aims to achieve where possible a closer relationship between numbering areas, charging district boundaries and telephone directories.
- Telephone directories for adjacent areas are available free of charge and customers in metropolitan fringe areas may readily obtain copies of directories for both the metropolitan and adjacent areas. Any customer may, for a fee, have a 'foreign' entry inserted in a directory other than the directory covering their area; while this is normally of interest to business customers, it is equally available to non-business customers.
- The Directory Assistance service is being improved by the progressive introduction of Telecom's computerised Directory Assistance Service (number codes 013 and 0175). Until recently there have been some constraints for Directory Assistance operators in locating listings for wanted numbers in a locality spanning a metropolitan/country network boundary. As enquiries regarding, say, a 'Frankston' customer, may come from anywhere in Australia, reliance on local knowledge on the part of the operator is not practicable.

- These constraints are being overcome by the development of, and further improvements to, Telecom's Computerised Directory Assistance facility, were implemented nationally by mid-1986. With these improvements, the fringe boundary localities are specially flagged by computer software and operating procedures then guide the operator through a sequence designed to ensure that an enquiry regarding an existing telephone number can be satisfied. However, under peak load conditions, the demands on operators and the supporting computers which are imposed by these extra procedures are such that it may not be feasible to achieve a 100% success rate.
- The fault incidence for some Mount Martha customers' service has, in the past, been higher than normal. However, Telecom has undertaken a special, \$100 000 maintenance program in the Mount Martha exchange area, which involves upgrading the quality of exchange switching equipment and external cable distribution plant. This program has now been largely completed, and some local community groups have since acknowledged an improvement in service quality.
- The above program, along with regular maintenance attention, will generally ensure that the Mount Martha exchange will perform well until the early 1990s when it is planned to be replaced by new-generation, computer controlled switching equipment.²

Conclusion

3.6 The Committee considers that Telecom has adequately addressed the issues raised by Peninsula residents during both phases of the inquiry. Further, it considers that Telecom has made considerable progress towards rectifying the problems. Therefore, the Committee does not consider that any further recommendations on the issues as they relate specifically to areas such as the Mornington Peninsula is warranted at this stage. However, the Committee strongly believes that Telecom should keep fringe-metropolitan areas such as the Mornington Peninsula under close scrutiny and, if necessary, adjust the

²ibid.

boundaries to accommodate urban corridor growth, such as was experienced on the Peninsula.

Chapter 4

The Service Centre Issue

Background

4.1 In May 1980 Telecom introduced, as part of its Community Access 80 Scheme (CA80), a special reduced community access or 'C' rate (timed local call) for customers to call a 'service centre'. This was to provide a concession to rural customers in isolated areas, without local call access to the nearest centre providing basic services such as shops, medical services and schools. 'C' rate, or timed local calls, are charged at the local call rate for each 3 minutes or part thereof. An essential element of Telecom's view of the service centre concept is that community call access will only be provided to one full service centre from a customer's exchange because of cost and revenue considerations.¹

Criticisms and Concerns

4.2 During the inquiry the Committee heard a number of criticisms of the operation of the service centre concept but also received many representations seeking its extension. Critics of the service centre arrangements argued either that the selection of some specific service

¹Submission No. 496, Attachment 4.

centres had been inappropriate or that the list of minimum services considered necessary by Telecom was too restricted. Other witnesses, who supported the basic concept, sought extensions to the scheme such as untimed access to the service centre in lieu of the charge per 3 minutes, or access to more than one service centre.

4.3 A substantial volume of complaint was received from organisations and individuals who lost untimed local call access to their historical service centre following the introduction of automatic facilities. It was claimed that this had occurred without adequate, prior consultation and, in some cases, without majority community support. Typical of these complaints was that of Mr R. Conachan of Central Creek via Duaringa, Queensland. Mr Conachan, representing a group of local subscribers, claimed that, although he and his neighbours regarded Duaringa as their service centre, they had been allotted the Woorabinda Aboriginal community as a service centre for the purpose of the CA80 charging scheme. Mr Conachan told the Committee:

Of the nine numbers in Woorabinda, none would ever telephone the other 11 outside subscribers. If they ever have, it would be only on one number and on rare occasions. There is now talk that Nulalbin 982026, whose service town is Baralaba, is to have local calls to Woorabinda. This gives these people — I believe there are another six people as well — exactly nothing. I can assure you that, to the best of my knowledge, since Nulalbin has had a telephone they would never have had cause to call Woorabinda.²

4.4 Further, much dissatisfaction was expressed to the Committee on the inadequate range of community and commercial facilities available at the service centres to which concessional rates have been granted. An accusation repeatedly levelled at Telecom during the public hearings and meetings was that the services and amenities available at service centres, determined by Telecom to meet basic minimum needs, were arrived at by city residents applying metropolitan yard

²Evidence, p. 219.

sticks. The rural and remote residents argued that their needs were different from those of their city cousins. They claimed to need concessional calling access to the following range of services additional to those already recognised by Telecom:

- contractors;
- farm machinery spare parts suppliers;
- seed merchants;
- pastoral houses;
- machinery manufacturers and retailers;
- commodity boards, and
- government offices and advisers.³

4.5 Telecom advised the Committee that its definition of basic, minimum services needed in a service centre is as follows:

- medical service;
- prescription dispensing facilities;
- schooling;
- general provisions (meat, groceries, etc);
- banking facilities;
- service station facilities (fuel, lubrication and basic repairs), and
- postal services.

4.6 Telecom, also claimed that centres which provided the above facilities also generally had all or many of the following additional facilities:

- legal/accounting service;
- clothing;
- hardware;
- transport (land based), and
- Commission agents (machinery), produce, stock and station.⁴

³See for example, Evidence p. 361.

⁴Exhibit No. 74, p. 2.

4.7 In addition to considering basic, minimum needs of telephone customers when determining service centres, Telecom also had regard to the argument that:

... smaller centres which were closer and reasonably accessible to rural communities and which met the basic essentials should not be by-passed in favour of larger centres. This was to be applied to ensure that Telecom's charging policies did not adversely affect the economic survival of smaller centres in rural and remote areas.⁵

The circumstances of residents of the service centres are thus also a consideration.

4.8 As well as these complaints about the implementation of the service centre concept, there has been pressure for a widening of the scheme. Specifically, the Committee received submissions urging:

- community calling at the 'C' rate for rural and remote callers to large regional centres in lieu of, or as well as, their current service centre;
- untimed local call access to their service centre regardless of the distance involved, and
- either 'C' rate or untimed local call access regardless of distance to 2 service centres in cases where a community is located midway between them, each centre being regarded by half the residents as the service centre for that community.

Each of these would reduce Telecom's revenue and, should they lead to increased usage, might increase costs. The first proposal would also disadvantage businesses in the present service centres.

Telecom's Response

4.9 Telecom argued to the Committee that it had been sufficiently responsive to community claims of anomalies in the implementation

⁵ibid.

of CA80. It was argued that Telecom has demonstrated flexibility by reassessing and changing 25 community service centres as a result of representations received from customers and Telecom district staff. Telecom has also accepted the requirement to provide community call access to 'partial service centres', (i.e. rural communities which do not quite meet the essential criteria for service centre status), in addition to providing access to a full service centre.⁶ Also, in 16 cases of split community interest, Telecom consulted with the communities concerned and accepted their proposed alternative.⁷

4.10 With regard to the minimum services needed in a service centre, Telecom claimed that:

...it was never the intention that 'service centres' were to provide *all* the business, commercial and community needs — such as would be available for example, at a major regional centre — but rather that certain basic minimum needs be met.⁸

In addition, Telecom was obliged to consider the interests of customers in the service centres, who might lose by diversion of business from their community, as well as those outside the centres, who might desire access to a larger town. It was necessary to attempt to achieve some balance between the interests of the two groups.

4.11 For most rural and remote users affected by the scheme, Telecom claimed, it was a marked improvement on earlier arrangements. Before CA80, many calls to what are now service centres were trunk calls at a rate of approximately 81c per 3 minutes. This fell to 9c per 3 minutes on the introduction of the scheme.

4.12 Telecom is strongly opposed to demands for further call charge concessions on the grounds of cost and revenue effects, equity and the

⁶ibid. , p. 1

⁷ibid. , p. 4.

⁸ibid. , p. 1

fear of not being able to quarantine the flow-on effect of granting such concessions to select communities. In response to the issues raised in this and the following Chapter, Telecom estimated the annual revenue effects of the various proposals. The full text of Telecom's assessment is included at Appendix VIII. The estimates relating to an expansion of the service centre concession can be summarised as follows:⁹

| Concession | Estimated Reduction in Call Revenue Per Year \$m | | Estimated Additional Capital Expenditure in Network in Network \$m | |
|---|---|---------|--|---------|
| | Direct | flow-on | Direct | Flow-on |
| 'C' rate call to local call rate for calls to/from service centre | 1.8 | 126 | 1.5 | 60 |
| Local call fee access to large regional centres | 52.2 | 195 | 8.4 | 75 |
| 'C' rate access to large regional centres | 45.5 | 185 | 4.4 | 65 |

4.13 It is clear that, while the direct cost of extending the service centre concession by allowing local call charges for calls to and from service centres is quite small, the flow-on costs are estimated to be very large. Both direct and flow-on costs for the other proposed concessions are quite large. The effect of these cost increases can be best appreciated by considering how they would be offset within the overall Telecom charging system. Telecom estimates that, based on 1984-85 usage data, an increase of one cent in the local call charge Australia-wide would generate \$65m in revenue. Full implementation of the first two proposals, which would have a net negative revenue effect of \$520m, would therefore require an offsetting increase of 8c

⁹Exhibit No. 85.

per local call if Telecom was to fully recover the revenue loss.¹⁰

4.14 Almost all this effect results from the estimated flow-on of the various concessions. The Telecom study claims that, based on Telecom's practical experience, it is impossible to quarantine such concessions. If remote customers are to receive local call access to the service centre, Telecom believes there will be irresistible pressure for similar concessions from customers in zones around capital and provincial cities, who are also currently eligible for 'C' rate charges. Extension of the concessions to these areas would be extremely costly. The Committee is of the view, however, that such concessions can be quarantined in much the same way as the Australian Taxation Office designates remote zones for taxation purposes.

Committee Findings and Recommendations

4.15 The Committee is of the opinion that the designated list of basic minimum services required in a service centre is generally relevant and suitable to the needs of rural and remote residents. However the Committee believes that the list should be expanded to include one further minimum need; agricultural service facilities. In addition the medical service should be defined to comprise at least one doctor, and schooling defined as the provision of at least primary schooling. Further the Committee is of the opinion that the criteria must be applied consistently.

4.16 The Committee therefore recommends that:

Recommendation 1: Service centres under the Community Access Scheme (CA80) should be defined as centres providing access to the following minimum services:

- medical services comprising at least one doctor;

¹⁰See Appendix VIII for details of calculation.

- prescription dispensing facilities;
- schooling to at least primary level;
- general provisions (meat, groceries, etc);
- banking facilities;
- service station facilities (fuel, lubrication and basic repairs);
- postal services,
- agricultural service facilities.

Recommendation 2: Telecom should continue to review cases where designated service centres are disputed by residents and negotiate with residents who still reject the service centre to which they have been allotted.

Recommendation 3: Telecom should review the decisions relating to those service centres which barely qualified as such in 1980 according to the required criteria. The review should determine whether since 1980 there has been any further withdrawal of commercial or community facilities to the extent that the town can no longer fulfil the requirements of a service centre. If the determination shows there has been such a withdrawal, Telecom should reverse its initial decision and offer an alternative and more suitable service centre.

4.17 While noting Telecom's reservations on the cost of extending concessions under the CA80 Scheme, the Committee believes that it would be possible to limit the concession. We also note that the cost of extending untimed local call access to the service centre only to subscribers currently eligible for 'C' rate calls under Countrywide Calling in extended zones would not be great. The Committee therefore recommends that:

Recommendation 4: Subscribers currently eligible for 'C' rate calls to their local service centre under Countrywide Calling in extended zones should be given untimed local call access in lieu but Telecom should resist flow-on of this concession to other groups.

4.18 The Committee has determined that there is an alternative way of providing access for rural and remote customers to a greater range of community, commercial and government services at regional centres. The alternative method would require extension of Telecom's 008 service, which is currently only available on an Australian wide or State wide basis. This service permits commercial or government customers to provide a toll free number for incoming calls. Extension of the 008 service to a regional level would provide an affordable means for regionally based businesses and services to offer the facility to their customers. If the service were extended to a regional level, many benefits could flow to customers dissatisfied with the facilities available in their designated service centre.

4.19 The Committee therefore recommends that:

Recommendation 5: Telecom should provide the 008 service on a regional basis.

Chapter 5

Countrywide Calling

Introduction

5.1 When Telecom began to plan for the Rural and Remote Areas Program (RRAP), it concluded that the charging and zonal practices then applying to standard zones would not be appropriate for the conditions which existed in remote areas with a low density population spread over long distances. The standard zones since 1960, it will be recalled, each covered an area of about 360 sq. km. Therefore, to support the RRAP, new zonal and charging principles were developed and introduced in October 1983 as part of a total package known as the Countrywide Calling Zonal and Charging Scheme.

5.2 The scheme's main purpose was to facilitate the provision and operation of modern telephone services in the more sparsely settled areas of Australia at a reasonable cost balance to customers and the community. It was the vehicle which Telecom used to zone, for call charging purposes, many rural and remote parts of Australia, which previously did not have a telephone system. It allowed rural and remote customers to have access to a greater number of other customers at a reasonable rate and reduced the cost of implementation of the modernisation program so that funds could be released for use in other

programs such as the RRAP.¹

Zonal Principles

5.3 In implementing Countrywide Calling, it was first necessary to establish charging zones. New extended zones were established in remote areas with calls between customers within each zone generally being charged at the Community Call, or 'C' rate. Untimed local calls, however, were available to customers within the zones for calls between customers connected to, and within a 32km radial distance of, the same automatic exchange or connected to the same manual exchange. This generally maintained the established 32km radius for local calls as a Telecom yardstick.

5.4 In some cases, the new extended zones contain one or more of the former standard zones. These zones continued to exist with local call rates applying within them and the general charging principles applying to calls between them and other areas in the extended zone. The reason that some extended zones included one or two standard zones, while others did not, was Telecom's desire to preserve the call charging arrangements for those customers within the larger regional centres and service centres. By retaining the existing standard zone surrounding such a centre, the core existing call charging arrangements were preserved.² In creating the new extended zones, Telecom did, however, eliminate some standard zones. Many of these cases have given rise to complaints from customers in the former standard zones.

5.5 Other than in some concessional circumstances provided under Countrywide Calling, charging rates for calls between zones and charging districts are based on distance between the centre of the zones and districts concerned. The central points in the zones and districts on

¹Submission No. 496, Attachment 7

²Evidence p. 818.

which this calculation is based are called charging points. They are determined by an accurate measurement of latitudinal and longitudinal coordinates. Any boundary change can therefore snowball, affecting charging points, and thus charges, across the country.

5.6 The boundaries of extended zones were determined in accordance with three principles:

- customers within an extended zone were to share, as far as practicable, a community of interest;
- customers within an extended zone were to have access to a minimum of 500 other customers at a reasonably low call fee, and
- existing standard charging zones in the more densely populated areas were to remain essentially unchanged.³

5.7 The creation of the extended zones caused considerable controversy. The Committee heard much criticism during the inquiry from subscribers claiming that the boundaries were drawn without consultation with local residents or Telecom officials. One view expressed consistently by members of the public during the inquiry was that instead of creating and then applying the new Countrywide Calling principles, Telecom should have merely extended outwards, the existing standard zonal arrangements which applied to metropolitan areas.⁴ It was also argued that metropolitan callers have access to a greater number of other customers and a wider range of services on an untimed local call basis than do their rural and remote counterparts.

5.8 Telecom rejects both these views. On the question of consultation, Telecom representatives advised that Countrywide Calling principles were sent from Telecom national headquarters in Melbourne, to each State headquarters, with guidelines for their implementation. State headquarters officials then drew the boundaries after consultation with the various District Telephone Managers. Telecom does

³ibid.

⁴See for example, Submission No. 369.

concede however that this process of consultation and interaction occurred only between Telecom officials and not between Telecom and the public.⁵ This omission may account for much of the adverse public reaction.

5.9 This deficiency may have been partly offset by some flexibility in Telecom's application of the zonal principles. Boundaries initially proposed could be adjusted provided there was no deviation from the principles. Further, as the area for zoning grew more remote, the zones became larger, to ensure that the zoning principles applied. In many cases the location of the service centre dictated where the boundary was drawn.

5.10 Telecom argued to the Committee that extension of the standard zones would not have been appropriate. Rural and remote areas are sparsely populated and the basic premise of standard zones is that they cover a maximum area of approximately 380 sq km. Within the standard zone there is untimed local call access. If zones of this size were created in remote areas there would have been thousands of extra zones, some having less than 30 customers, thus only permitting untimed local call access to this small number.⁶ Telecom rejected the argument that non-metropolitan telephone users are inequitably treated because of their access to smaller numbers of other customers within the same standard zone as the basis of zoning is distance rather than population.

Location of Exchanges

5.11 Exchange locations, often affect the placement of boundaries, not only in rural and remote areas but across the community. Exchanges, in turn, are often initially sited as a result of zonal boundaries.

⁵Evidence p. 816

⁶Evidence, pp. 817-821.

The preferred location is a choice based on economics. Significant economic costs to Telecom can occur if an exchange is placed inappropriately. Customers, on the other hand, are also affected economically by the location of exchanges. Historically the location of exchanges has hinged on population distribution and the optimum service of that population distribution, within the technical limits that applied. In the past, the distances over which line plant could practically be deployed influenced these decisions. However, in the future, with new technology, some of these technical limits will no longer apply.

5.12 The planning processes involved in the location of exchanges are based on long term projections. The most common projection is 25 years and in some cases even longer, particularly where there is an advancing front of population growth, such as in outer suburbia. Telecom maintains that it is crucial that exchanges are sited in keeping with these projections because of the optimisation of plant that will ultimately occur. It is normal therefore, in an outer suburban situation, to find quite a large exchange sited in green fields. Initially, it may have very little urban development around it but is the best site based on projections of population trends. Thus, demographic projections and the economics of engineering plant have a large bearing on the siting of exchanges.⁷

5.13 Telecom deals with complaints about the location of an exchange or about the exchange to which a customer is connected by sending customer service staff and planning engineers to review the area. Consultation with customers may occur if the dispute on a boundary is of a marginal nature. If customers can show a community of interest other than with the exchange to which they are connected, and there is no significant cost penalty in transferring them to another exchange, Telecom will endeavour to take action in the customers favour.⁸ Assisting one customer or group of customers in any of these ways may, however, disadvantage others.

⁷Evidence, p. 822.

⁸Evidence, p. 824.

Nomenclature

5.14 Concern was expressed to the Committee in both Western Australia and western Queensland about the naming of some extended zones. The lack of local knowledge when the boundaries were drawn is reflected in unrelated nomenclature. The extended zone covering the Hughenden area in western Queensland, for example, was named Kennedy when its traditional identity was Flinders. The extended zone covering the Richmond area, on the other hand was named Flinders.⁹ The Committee considered that the community concerns on this issue were valid and therefore recommends that:

Recommendation 6: Telecom should institute a review process, in conjunction with local government authorities, to overcome any problems that have arisen in the naming of extended zones.

Summary of Criticisms and Concerns (Zonal Principles)

5.15 While Countrywide Calling has generally been well received by the 10 000 customers in extended zones, many expressed considerable anger and frustration to the Committee about some zonal and charging principles applied in Countrywide Calling. Customers, in many cases, still do not have access to a quality telecommunications service. Some feel that Countrywide Calling is not a suitable scheme, and that there was no prior consultation with the community before the introduction of the scheme. Further, they believe that Telecom is not fulfilling its social obligation to provide a telecommunications service to all Australians at an affordable price.¹⁰

⁹Evidence, p. 338.

¹⁰See for example Submission No. 369

5.16 The main criticisms and concerns specifically relating to the zonal principles were outlined above. It seemed to the Committee that many of the difficulties arose from lack of adequate consultation between Telecom and the communities affected. It is not too late for this consultation to occur and the Committee believes that there is potential for significant improvement in Telecom's relationship with its rural and remote customers if proper consultation is undertaken.

Call Charging Principles

5.17 Having concluded that extended zones were necessary, Telecom had the onerous task not only of setting appropriate zonal boundaries but also of devising an acceptable charging policy. Such a policy had to take into account the unique characteristics of the extended zones, the cost of services, the difficulty of providing them and the prospect of having to finance the installation of thin routes. The end result was the call charging principles adopted for Countrywide Calling. These, like the zonal boundaries, have met with a mixed reception.

5.18 The call charging principles adopted for Countrywide Calling related to distance between callers and the types of equipment available to customers. In summary:

- Untimed local call rates were available on calls between;
 - customers connected to, and within a 32km radial distance of, the same automatic exchange, and
 - customers connected to the same manual exchange.
 - Where customers were serviced by partly privately erected lines connected to automatic exchanges, the 32km distance was taken to commence from the point at which the private line joined the network.
- 'C' rate charges applied to calls between;
 - customers within an extended zone but outside the limits above, and

- an extended zone and an adjoining zone where the caller's designated service centre was located.
- A special, low 'F' rate of 58c for 3 minutes applied to calls between an extended zone and an adjoining zone with a requirement that each customer have access to at least 500 other customers at this rate.
- Calls between an extended zone and any non-adjoining zone in the same charging district incurred a maximum charge at the 'Q' rate of \$1.44 per 3 minutes.
- Calls between an extended zone and zones outside its charging district incurred a charge based on the distance between the centres of the charging districts concerned.¹¹

5.19 This complex charging pattern was designed to balance competing claims in a way which would be basically revenue neutral for Telecom. Any slight, overall revenue effects likely to result were expected to benefit customers rather than Telecom. In practice this has proved to be the case, although some customers have probably benefited financially from the change, while others with different calling patterns may be paying higher charges. While some customers still face timed local call ('C') rates to call their neighbours, this is a factor of distance and its general effect on charging principles.

5.20 Much of the customer concern with Countrywide Calling charges related to service centre anomalies. In some cases customers have lost local call access to their traditional service centre. Telecom argues, however, that this may not necessarily represent a net adverse result because of counterbalancing savings on other calls over longer distances.¹²

¹¹Submission No. 496, Attachment 7, p. 2.

¹²Evidence, p. 831.

Rationale for Countrywide Calling

5.21 Regardless of the charging effects, Telecom argues that Countrywide Calling is beneficial to rural and remote users. This system, Telecom argues, is an essential first step to major technological improvements and is significantly cheaper than any alternatives. The resulting savings are passed back to all Telecom customers, including those in rural and remote areas, through lower prices.

5.22 Specifically, Countrywide Calling is said to allow the rapid introduction of the Rural and Remote Areas Program which will provide world class telecommunications services to remote markets. Telecom claims that few such markets in the world are served in this way. The proposed investment in the program is \$436m at current prices and delays in making this investment would result in an even more unfavourable return than the low rate already expected. The revenue foregone would inevitably result in higher charges to all customers. Implementation of the system also allowed Telecom to avoid installation of switching equipment estimated to cost \$30m.¹³

5.23 Whatever the validity of these arguments, Telecom clearly has not convinced some of its rural and remote subscribers of the benefits of Countrywide Calling. When questioned on this point at public hearings, a Telecom representative commented:

It is very difficult to convince them at all. They do not believe it. The way we look at equity is to try to apply principles evenly across Australia . . . Regardless of the effort that we have put in to informing customers there is still a great deal of misconception.¹⁴

¹³Submission No. 496, p. 15, Appendix X.

¹⁴Evidence, p. 826.

Committee's Findings and Recommendations

5.24 In considering the issue of Countrywide Calling, the Committee, like Telecom, faced a dilemma. Do the provision of a technologically superior telecommunications service and the acknowledged general benefits of Countrywide Calling outweigh the disadvantages to some rural and remote customers. The Committee considered that some options were open to Telecom which would tip the balance decisively in favour of the new system. These relate to the cost of calls within extended zones and to service centres, anomalies created by the elimination of some standard zones, and, Telecom's relations with its rural and remote customers.

5.25 With regard to the cost of calls within extended zones, Telecom argued strongly against proposals for untimed local call access throughout each zone. The argument, which is included in Appendix VIII, holds that, although the direct cost of this concession would be small, very expensive flow-ons would be inevitable. Telecom further argued that the Countrywide Calling scheme already provided significant benefits to rural and remote users. Furthermore, the disparity between local call rates within extended zones and trunk rates to nearby areas could lead to customer criticism.

5.26 The Committee is conscious of the risk of costly flow-ons. We believe, however, that some further concession could be extended to rural and remote users without serious flow-on. In particular, a variation to the timing interval for 'C' rate calls, rather than their replacement by untimed local calls would be beneficial. The present 'C' rate is equivalent to one local call each 3 minutes. Extension of this time period to, say, 6 minutes for calls within the same extended zone or to a service centre would benefit customers at little cost to Telecom.

5.27 The Committee therefore recommends:

Recommendation 7: Telecom should make a further concession based on the time interval on charges for calls within the same extended zone or to a service centre.

5.28 The situation of Tambo, in western Queensland, is a good example of anomalies caused by the elimination of some standard zones. Prior to Countrywide Calling, Tambo had access to 'C' rate calls to Charleville and the, somewhat higher, 'F' rate to Blackall. Elimination of the former standard zone changed the location of charging points in such a way that calls to Blackall were chargeable at the higher 'M' rate. This resulted in substantially increased bills for many Tambo customers.¹⁵

5.29 The Committee believes that the increases in this, and in some similar cases, are unacceptably high and therefore recommends that:

Recommendation 8: Telecom should examine the anomalies caused by the elimination of some standard zones to determine whether some relief can be offered to customers in these cases.

5.30 In Phase I of the inquiry, the Committee recommended extension of local call access more widely between capital city call zones and adjacent, newly urbanised areas.¹⁶ Telecom, in response, proposed to introduce a maximum of 'C' rate for all calls within greater charging districts based on the capital cities. The effect of this was to eliminate STD calls at the 'A' or 'F' rates within capital cities and their immediate surrounds. All calls within the greater metropolitan districts would be at either 'C' or local call rates although calls across the boundaries of the greater district would often still be at STD rates.

¹⁵ Evidence, pp. 505-507.

¹⁶ *Ringling in the Changes*, p. xi.

5.31 The Committee asked Telecom in Phase II to estimate the effects of applying a similar concept in country areas. Telecom advised in July 1986 that extension of the greater district concept to country areas would be of potential benefit to more than one million country customers. Preliminary calculations of the cost effect, based on 1984-85 data, indicated that the flow-on would represent a concession to country customers of about \$6 million annually. Some hypothetical examples of cases in which the concession would apply in four States are at Appendix IX.

5.32 The Committee believes that there is a strong case for extension of the concession to country areas. It would further recognise the decreasing importance of distance as a factor in charging and would simplify Telecom's charging scales, leading to greater public understanding and better customer relations. The Committee therefore recommends that:

Recommendation 9: Telecom should extend to rural and remote areas the concession being given in metropolitan areas with replacement of 'A' and 'F' rates by 'C' rates of charge within Capital City Greater Charging Districts.

5.33 Most importantly, the Committee found that Telecom had not provided adequate information to, or consulted sufficiently widely with, its rural and remote customers. The changes involved in the Countrywide Calling zonal and charging changes are significant and better consultation would have been beneficial both to rural and remote residents and to Telecom.

5.34 The Committee recommends that:

Recommendation 10: Telecom should discuss proposed changes to zonal and charging policies with

customers who might be affected prior to their implementation.

Recommendation 11: Telecom should show flexibility during the consultation process, and, where possible, offer alternative zoning arrangements which will more adequately reflect customer needs within the bounds of existing zonal principles and financial constraints.

Chapter 6

The Rural and Remote Areas Program (RRAP)

Background

6.1 During the latter half of the 1970s and early in the 1980s, Telecom made considerable progress towards achieving its objective, set in 1960, of enabling 'all customers to have access to a fully automatic national telephone system'.¹ By June 1984 the number of manual services had decreased from 146 000 to 26 200 and automatic services in non-metropolitan areas had increased from 1.017 million to 2.175 million. The number of customers on part privately erected (PPE) and maintained lines was reduced from 28 000 to 10 600.² As at June 1985, the network was 99.7% automatic, with the number of telephone services totalling 6.2 million, of which about 19 000 were connected to manual exchanges. In addition there were about 9000 customers on PPE lines in rural areas.³ Progress is occurring at an accelerating rate with the number of manual telephone services reduced from 26 200 in June 1984 to 12 110 in June 1986 and 5100 of these scheduled for automation in 1986-87.⁴

¹Submission No. 496, Attachment 1

²Submission No. 496, Attachment 10

³Evidence, p. 786

⁴Telecom Australia, *Annual Report 1986*, Telecom, Melbourne, 1986, p. 6.

6.2 The Rural and Remote Areas Program (RRAP) was introduced in February 1984 as Telecom's main vehicle for finalising the implementation of this objective. To ensure, in Telecom's words:

...that Australians who require a phone, no matter where they live in the outback, will have access to the world telecommunications network at reasonable rates.⁵

The complete rural network would be automated, all part privately erected lines would be replaced by Telecom facilities and approximately 7000 new services would be provided in the more remote areas for people who could not previously be provided with a service. This required Telecom to choose between technological and charging options with results which have again caused some controversy.

6.3 The objectives to be achieved by 1990 under RRAP are as follows:

- conversion of the remaining manual services to automatic;
- replacement of all Part Privately Erected (PPE) and maintained lines by Telecom facilities, and
- the extension of access of standard telephone services to all Australians who require them at reasonable rates.⁶

6.4 Telecom's commitment to the program to 1990 involves a total direct capital expenditure of about \$436m at current prices. This will provide modern basic telecommunications facilities to approximately 43 500 rural and remote customers. Additional capital expenditure is involved in the upgrading and provision of major trunk transmission systems and for work at higher order switching exchanges. Appendix X provides a summary of the planned progress of RRAP to 1990. It illustrates the number of customers in various categories and the amount of capital funds involved in each State.⁷

⁵Telecom Australia, *Telecommunications in the Outback*, Melbourne, September, 1984, p. 16.

⁶Submission No. 496, Attachment 10, p. 1.

⁷Exhibit No. 93.

6.5 So that the Committee could appreciate the financial implications of the RRAP, Telecom was asked to provide information on the costs and savings associated with the replacement of manual exchanges by automatic facilities and the upgrading of customers' lines to a standard suitable for automatic working. Telecom in response provided a study based on Rolleston, Queensland.

6.6 At Rolleston, the following work was carried out in the early part of 1985:

- installation of an automatic exchange to replace the manual exchange;
- upgrading of the local customer cable plant to meet the needs of customers in and near the town;
- installation of a digital radio concentrator system to meet the needs of customers and new applicants located beyond the cable network and to replace existing privately owned and maintained party lines; and
- upgrading of the trunk lines to the switching centre of Emerald.

6.7 The capital cost of the work was approximately \$1.2m. Using average maintenance costs and based on an average 20 year plant life and a discounted rate of 12% at 1985 constant prices, the annualised cost of the installation is about \$190 000 per annum. The annual operating costs of the previous manual system were about \$48 000 in 1985 prices, including the labour costs associated with the manual handling of traffic. Therefore to provide 87 customers in the Rolleston area with an automatic service, Telecom was faced with an increase in operating costs of about \$140 000 per annum, or \$1609 per service.⁸

6.8 RRAP was made possible by technological advances which, for the first time permit extension of modern telecommunications into

⁸Exhibit No. 84.

remote areas at an acceptable cost. It involves, for Telecom, a requirement to upgrade a large amount of substandard plant and equipment and a series of choices on the best technology both to replace that equipment and to provide services to previously inaccessible areas. Telecom's 1986 Annual Report claims that more than 19 000 rural and remote customers have received new or upgraded services since 1984 as a result of RRAP.⁹

Replacement of Plant and Equipment

6.9 The largest component of remaining sub-standard equipment consists of part-privately-erected (PPE) lines. These are privately erected and maintained connections to the Telecom network funded by customers residing beyond the limits within which Telecom or its predecessor would supply a service. Customers have been permitted to make these connections for many years, but, in most cases, the quality of the plant erected is insufficient for it to connect to the new automatic systems. The Committee, for example, was told and saw photographs of a PPE line which doubled as a boundary fence while one witness claimed that:

In the old days, as long as you could hook on to the top wire of the fence and drop the shutter in the post office, you had communications ...¹⁰

Customers had been allowed to make these connections to the official network by Telecom and its predecessor for many years under a variety of funding arrangements. To meet the RRAP objective of access by all customers to a fully automatic national system, it is necessary that they now be replaced by higher quality, Telecom maintained equipment.

⁹Telecom Australia, *Annual Report 1986*, p. 15.

¹⁰Evidence, p. 220.

History of the Provision of Lines for Rural and Remote Telephone Subscribers ¹¹

6.10 Prior to 1969, the Postmaster-General's Department (PMG), Telecom's predecessor, provided line plant to a maximum of '96 plant units' which corresponded to expenditure of about \$1000 or a minimum of about 3/4 mile of line. The subscriber had to provide and maintain any further construction to his premises; called the 'private section'. Lines containing 'private sections' were called PPE lines.

6.11 Policy decisions relating to the ultimate elimination of low grade PPE lines were taken in 1969 and 1970. On review, the Government had decided in 1968 that the unitary basis of departmental line provision should be maintained but that the PMG should, 'provide, against repayment with interest, funds for the construction of lines beyond the area of [its] responsibility'. This meant that private sections of line were to meet departmental specifications but could be privately constructed by subscribers if preferred. All new private construction to both automatic and manual exchanges should be constructed to PMG specifications, with the Department prepared to provide funds subject to repayment, with interest. Such construction could be undertaken by the customer, a contractor or the PMG at the customer's discretion. Repayments by subscribers could be spread over a maximum of 10 years, with interest at the long-term bond rate.

6.12 During 1970 the previous policy was superseded by one which placed with the PMG the responsibility for constructing and maintaining all new lines for the full distance from the appropriate exchange to each customer's premises. The PMG also bore the cost responsibility for the construction up to a point 15 miles radially from the exchange with the customer making an unconditional contribution towards the cost of construction beyond that point. Subscribers who provided or upgraded lines under the 1969 and early 1970 policy were reimbursed

¹¹The following background information is drawn from Exhibits No. 46 & 73.

their outlay (or relieved of residual debts) and their lines were taken over by the PMG.

6.13 It was recognised at the time that there would be an upsurge in new applications for service arising from the policy changes and, therefore, long delays would be experienced in meeting some requests for service because of overall fund limitations. For this reason, the new policy permitted the erection of PPE lines by customers to the former PPE standards in special cases. Telecom states that the approval for the provision of such PPE lines was on the understanding that it was an interim measure and the lines would ultimately become redundant. Further, Telecom claims, it was made clear that no compensation would be paid when redundancy occurred.

6.14 In 1977 the policy was again revised. In automatic exchange areas and manual exchange areas programmed for conversion to automatic operation within 2 years, the distance for which line plant was provided at Telecom cost was extended from 12km to 16km radially from the exchange. Beyond the 16km point, applicants were required to make an unconditional contribution. The contribution rate fixed in 1973 was retained, namely, \$160 per radial 1/2km or part thereof. In manual exchange areas (other than those programmed for conversion to automatic operation within 2 years), the distance for which the Telecom provided line plant at its own cost was retained at 8km.

6.15 With the introduction of the Telecom 'Rural Fees' policy in 1982, customers located more than 16km from the nearest (rather than actual) exchange were required to pay a considerably lower, once-only connection or conversion fee. This fee had a ceiling limit applied at 40km and beyond. For connection, the customer paid, in addition to the standard connection fee, \$25 per 0.5km between 16 and 40km. For conversion the rate was halved to \$12.50.

The Present Position

6.16 Telecom could not provide detailed statistics on the number of customers who erected PPE lines since the 1970 directives, but considered the number to be quite low. Work carried out on PPE lines generally took the form of short sections of construction to join existing PPE lines. Overall in the past 10 years there has been a significant reduction in the number of customers on PPE lines; from about 26 000 to 9 000.

6.17 The Committee took extensive evidence on the limitations of the PPE equipment. It was claimed that the lines:

- suffer from poor reception due to induction;
- maintenance costs on outdated equipment was, and remains, considerable,
- the range of facilities available on an automatic system are not available on PPE lines.¹²

Their replacement, however, has not met with universal approval.

Manual Automatic Interface (MAI) Equipment

6.18 As an interim step towards the eventual replacement of PPE lines, Telecom has installed Manual Automatic Interface (MAI) equipment in a number of areas. This has been done where PPE lines not suitable for connection to an automatic exchange were linked to an exchange which has been converted from manual to automatic. In some cases MAI equipment has also been required for Telecom lines beyond a certain range. In both cases, the MAI equipment will be replaced as the RRAP proceeds with technology which will provide a full range of automatic services.

¹²See for example, Evidence, p. 458.

6.19 The MAI equipment provides some automatic services. It enables customers to receive automatic incoming calls but requires the assistance of a Telecom operator to make outgoing calls. It has some serious limitations from the customers point of view. During the Queensland public hearings, the Committee was acquainted with the problems of being connected to the equipment. On incoming calls, for example, the calling interface equipment will transmit a party line warning for 8 seconds before the appropriate party code is sent. That code will ring for only 90 seconds and, if not answered, the calling party will be disconnected. This is not a very satisfactory arrangement for some customers. Further, the party line caller, upon completion of a call, must replace the handset and turn the generator handle vigorously to ring off. If this procedure is not followed parties on the line will be unable to originate or receive follow-on calls. As many of the PPE lines connected to MAI equipment are party lines, these limitations are inconvenient to a substantial number of users.¹³

6.20 There are currently about 1000 customers on MAI equipment in Queensland, and Telecom plans to provide all of these with standard automatic lines by 1990. The MAI equipment is seen by Telecom as a strictly interim measure to cover the period between the automation of part of its network and the follow-up installation of suitable lines or other transmission systems to replace PPE lines.¹⁴

6.21 The Committee recognises that there are inherent problems with the MAI equipment. However, we accept that Telecom intends to eliminate the facility by 1990 and replace it with a more suitable automatic system. The Committee therefore recommends that:

Recommendation 12: Telecom should continue to replace all Manual Automatic Interface (MAI) equipment as quickly as possible.

¹³Exhibit No. 92.

¹⁴ibid.

Other Problems with Conversion of PPE Lines

6.22 As well as the difficulties with MAI equipment, various cost and service complaints relating to the conversion of PPE lines were raised with the Committee. Some witnesses, indeed, objected to the actual conversion, maintaining that they were satisfied with the existing PPE line and did not wish to receive a better service because of the additional cost.

6.23 Others who were pleased with the expected improvement in the service, objected to the level of the costs associated with it. In particular, many witnesses argued that:

- In some cases, requests over a 10 year period, for advice as to what technological system or equipment could be used by customers to upgrade PPE lines and be suitable for interfacing with the automatic system, was not forthcoming from Telecom. Costly replacement of inappropriate equipment was now necessary.
- Related to this, no PPE lines, regardless of their quality are being utilised by Telecom in the automation process, leading to the obsolescence of equipment worth a great deal of money.
- customers in rural and remote areas living more than 16km from an exchange are charged up to \$600 for conversion from PPE lines to the automatic system, whereas customers on PPE lines within 16km of the exchange are converted free of charge;
- Customers have paid anything from hundreds of dollars to \$50 000 to install and maintain PPE lines, over distances from 1km to 150km. This investment has not been recognised by Telecom when attributing conversion costs.
- Telecom has not made an adequate concession to customers who have installed and maintained PPE lines since 1969.
- Customers who made application to Telecom for additional services while on PPE lines did not always receive the requested service due to technical problems. They are now faced with paying the full cost for the additional automatic service rather than the lower conversion charge.

- Telecom has not acknowledged or accounted for the fact that PPE lines erected and maintained at customers' expense have been generating income for Telecom.
- Some customers on very long PPE lines from small centres were connected to a much larger centre following the conversion, leading to, in many cases, the customer losing untimed local call access to the traditional local exchange, service centre and/or community of interest.

Telecom's Response to the Criticisms and Comments

6.24 Telecom's response to these criticisms can be summarised as follows:

- Telecom's financial commitment to the RRAP, which involves the conversion of 9000 PPE lines to the automatic system, is \$436m at current prices. Approximately one half of this will be spent in Queensland where most of the PPE lines are located. The rate of return on this investment is unfavourable and this already represents a substantial contribution by Telecom.
- conversion costs are offset by three factors:
 - customers will no longer have to pay the ongoing maintenance costs for outdated PPE lines. The average maintenance cost per annum of a PPE line of 20km length is \$900;
 - customers converting from PPE lines to the automatic system, and who live beyond 16km of the exchange are already being given a considerable concession in that they are only required to pay half the cost ie (\$600 plus \$150) that a customer receiving a new service has to pay (ie \$1200) and this concession more than adequately recognises the prior installation and maintenance costs of PPE lines, and
 - an automatic system increases the utility value of the service and, for this, rural and remote customers must be prepared to pay.

- The cost of conversion is generally lower than that charged overseas.
- Customers who lost some benefits of the PPE lines, such as free calls to other parties on the same line or local call access to a traditional exchange, would gain from other aspects of the conversion such as savings on maintenance or cheaper trunk calls.
- Telecom is not utilising any PPE line in the conversion because, in its experience, PPE lines do not consistently meet a standard suitable for a high quality automatic service.

The Committee's Findings

6.25 The Committee was sympathetic to many of the customers' problems described above. We recognise, however, that Telecom has made considerable progress towards the provision of a fully automated system which will eliminate many of the problems. Despite this progress, some aspects of the automation program are worthy of review.

6.26 The Committee does not consider that the flat rate fee for conversion gives adequate recognition to the investment made by the customer. The Committee therefore recommends that:

Recommendation 13: Upon conversion from Part Privately Erected (PPE) lines to an automatic exchange, Telecom should assess, on an individual basis, the conversion costs for customers who have previously installed and maintained their own PPE lines. Telecom's adjusted cost should reflect the contribution made by the customer towards the installation and maintenance of their PPE line on a pro-rata scale commencing from 1969.

6.27 Similarly, the Committee was sympathetic to customers who had sought additional services while still on PPE lines. The Committee therefore recommends that:

Recommendation 14: Outstanding applications for additional services made by customers converting from manual PPE lines to an automatic system should be treated as existing rather than new applications for the purposes of determining the connection fee.

6.28 The Committee was concerned by the anomaly which caused some customers on very long PPE lines from small centres to be connected to exchanges in much larger centres. In many cases this resulted in the customers losing untimed local call access to their traditional local exchange, service centre and/or community of interest. While understanding Telecom's technical dilemma, the Committee believes that some flexibility is possible. We therefore recommend that:

Recommendation 15: Telecom should examine the anomaly under which customers previously connected to PPE lines were diverted from their historical exchange to another exchange upon conversion to the automatic exchange system, thereby losing untimed local call access to their historical local exchange, service centre and/or community of interest, with a view to offering a mutually acceptable solution.

Technological Options ¹⁵

6.29 A large part of the public debate on the implementation of RRAP has arisen from Telecom's choice of technology. Several technological options are available; each with strengths and weaknesses in

¹⁵The summary of the technological options which follows was drawn from Submission No. 496 & Exhibit No. 89.

particular conditions of distance, climate, and customer requirements. The most controversial aspect of Telecom's choice of technology has been its preference for terrestrial based radio networks in lieu of satellite technology but other technological issues have arisen. The three basic technological options are cabling, terrestrial based radio networks, and satellite communications.

Underground Telephone Cables

6.30 In towns and other larger communities, where exchanges are generally located, customers within about 20km of the exchange will generally be connected by underground cable. This does not require a high level of technology and, according to Telecom, has the longest service life of any of the options. The cost of buried cables is proportional to the distance involved. Evidence collected in this inquiry suggests that customers are generally satisfied with this connection method.

Terrestrial Based Radio Systems

Analogue Radio Concentrator System (ARCS)

6.31 The Analogue Radio Concentrator System (ARCS) provides a service for a maximum of about 50 customers who can access, through a base station, a group of radio telephone circuits to one parent centre. This method is useful where a cluster of up to 50 individual customers is available within a 40km radius of a base station site.

6.32 At public hearings and meetings in western Queensland, Telecom customers raised concerns with the Committee about the quality of the ARCS equipment and the system itself. Congestion on the system, particularly at peak periods, was of greatest concern. As one

witness told the Committee, 'From 7 o'clock at night onwards, the ARCS was jammed fairly regularly'.¹⁶

6.33 Telecom advised the Committee that the matters raised at these hearings and meetings are currently being addressed. The Committee therefore recommends that:

Recommendation 16: Telecom should resolve the problems relating to the Analogue Radio Concentrator System raised during the course of the inquiry.

Single Channel Analogue Radio System (SCARS) and Small Capacity Radio Systems

6.34 These two systems are suitable for customers located relatively near an exchange or microwave trunk route but beyond the practicable limits of servicing by underground cable. Single Channel Analogue Radio Systems provide an exclusive telephone circuit between a telephone customer and a suitable entry point to the system. The range of a SCARS depends on the terrain covered and the height of the antenna but can reach 40km over reasonably level terrain. Small Capacity Radio Systems provide links between the national network and remotely sited telephone exchanges or remotely sited radio concentrators. They can also be used in conjunction with radio concentrators to provide dedicated circuits to high calling rate customers.

Digital Radio Concentrator System (DRCS)

6.35 In the planning for RRAP, it was realised that existing technology of the types described was not suitable for use in remote areas with low population density and long distances. The Digital Radio Concentrator System (DRCS) was developed by Telecom to meet this

¹⁶Evidence, p. 532.

need. DRCS is particularly suited to areas in which the customer population is low, widespread, remote from exchanges, and, inaccessibly located. The system comprises a series of repeater towers extending from an exchange at intervals of up to 50km, depending on the terrain. A total of 187 systems are scheduled for construction by 1990, of which 13, serving 675 customers, have so far been commissioned.¹⁷

6.36 A DRCS consists of three distinct stages; the customer station, the repeater station and the exchange unit. The exchange unit is located at the terminal exchange and chains of repeaters extend the system to serve DRCS customers within a radius of up to 50km from each repeater. The maximum number of repeaters in tandem is 13 providing a possible service range for each chain of repeaters of up to 600km along a route up to 100km wide.

6.37 Evidence taken during the inquiry suggests that most customers find DRCS to be a technically satisfactory communications system. Concern was expressed, however, about its cost to customers and about the system's capacity relative to that of satellite technology.

6.38 Telecom provided the Committee with comparative cost figures for DRCS and some other technologies. In a typical metropolitan area, the average approximate cost of installing a residential telephone, including equipment and cabling, is \$1500. In a typical rural area, an equivalent service costs \$6000. A single channel radio system would cost \$7000, while a service through DRCS would cost \$22 000. The maximum rate for connection to DRCS, however, is \$1350.

National Communications Satellite

6.39 Telecom also offers the ITERRA Network Service (INS) through the National Communications Satellite. This service allows transmission of telephone, data and text between a receiver and the national

¹⁷ Telecom Australia, *Annual Report 1986*, p. 15.

network. Fixed or transportable customer earth stations provide a satellite link through Telecom's Bendigo earth station to the network. INS is a high cost service. Large users in remote localities such as mining and minerals exploration companies have made use of the system but Telecom believes that the cost precludes its use as the normal vehicle for providing basic remote area telecommunications services.

Telecom's Technological Choice

6.40 Telecom uses all these technological options to provide services to its rural and remote customers. The main distinction is between satellite and terrestrially based systems and Telecom's decision to keep its feet firmly on the ground has been the most controversial technological choice. Various opponents of Telecom's decision to rely mainly on terrestrial systems have claimed that the satellite option would have provided a cheaper telephone service. Alternatively, it has been claimed that satellite technology would at least have provided a cheaper overall communications package by allowing telephone, television, radio and data transmission to occur in a single network. It was also argued that the satellite option would have allowed a more rapid provision of telecommunications to areas beyond the present Telecom network than will occur with the terrestrial systems.

6.41 The Isolated Childrens' Parents' Association (ICPA) argued strongly to the Committee that satellite technology would be more cost-effective than radio concentrator systems for the first two reasons suggested above. The Northern Territory Government supported these arguments and also claimed that Telecom's reliance on terrestrial based systems would delay provision of telephone services to some remote areas in the Territory; especially particular Aboriginal settlements. Satellite technology would have permitted connection priorities to be determined according to need rather than location. Both the ICPA and the Northern Territory Government found cost comparisons between radio concentrator and satellite systems difficult to make because of lack of access to detailed information on Telecom's costing of the terrestrial systems.

6.42 Telecom disputes the cost-effectiveness arguments. Telecom representatives told the Committee that:

After careful examination of all the customers' needs and of the economic and strategic factors, the DRCS was chosen as the tool to integrate into the network as it was the most cost-effective.

We hold no brief for any technology. Our job is to provide for those telecommunications needs of the Australian people and, as it says in the Telecommunications Act, 'with special regard to the needs of the people outside the major cities'.¹⁸

6.43 Telecom claimed that the ICPA proposal, in particular:

- overestimated the scope for simultaneous access to satellite services;
- presumed that education and other services would be supplied by satellite when decisions to do so had not been made;
- ignored serious technical problems with integrating a satellite telephony system into the terrestrial network, and
- based its costing on inappropriate equipment, thereby understating the cost.¹⁹

6.44 The Committee noted that, whatever the merits of the respective arguments, Telecom is already well advanced with the installation of terrestrial systems. The cost of changing direction is likely to outweigh any benefits. There may, however, be advantage in closer liaison between Telecom and those with differing views of the technological possibilities. In particular, 'hybrid' systems, or combined satellite/radio concentrator networks, as suggested by the Northern Territory Government, might provide earlier connection to the telecommunications network for some remote communities than would otherwise be available. Similarly, closer co-operation between Telecom

¹⁸Evidence pp. 1250 & 1256.

¹⁹Exhibit No. 82

and organisations such as ICPA would be beneficial in ensuring that the telecommunications network is able to play an appropriate part in meeting the educational needs of children in rural and remote areas.

6.45 The Committee therefore recommends that:

Recommendation 17: Telecom should co-operate closely with State and Territory Governments and with relevant non-government organisations to ensure that the telecommunications network is capable of playing an appropriate part in meeting the social and educational needs of rural and remote communities. In particular, Telecom should explore the potential of 'hybrid' or other systems to advance the program of delivery to remote communities in the Northern Territory so as to provide them with a reliable telephone system by December 1988.

Chapter 7

Telecom's Pricing Policy

National Uniform Pricing Policy

7.1 Throughout both phases of the Committee's inquiry views have been expressed that particular groups have gained from Telecom's pricing policy at the expense of other groups. Telecom charges are uniform across the nation while the cost of providing its services varies in different areas. It is argued from this that groups in the high-cost areas are 'cross-subsidised' from the charges paid by groups in other areas. Rural and remote customers of Telecom are clearly one high-cost group to service and therefore receive a cross-subsidy from customers in more closely settled areas. It should be noted that the definition of cross-subsidy implied in much of the public debate, and accepted by Telecom, goes further than transfers from profitable to loss-making areas of the enterprise. Telecom advised the Committee that it would define cross-subsidy in the following terms:

Cross-subsidisation occurs when the relationship of revenue to costs between certain customer or product groups is imbalanced. Whatever the cause of this cross-subsidisation (eg uniform pricing, rapid technological change not matched by pricing changes, etc) the result will be that cross-subsidised areas do not provide sufficient returns in relation to the resources dedicated to them. ¹

¹Exhibit No. 98

7.2 This definition goes further than would be supported by some economists in implying that an area may be profitable but still cross-subsidised if the return it provides is less than could be obtained by investment in other areas.² The Committee considers this a reasonable definition in Telecom's case because it takes into account Telecom's statutory requirement to provide a service in low profit as well as in loss making areas. It follows from this definition, however, that rural and remote customers of Telecom are not the only recipients of cross-subsidy. As Telecom acknowledges, private users in metropolitan areas receive a cross-subsidy from business users and there are several similar transfers within Telecom's pricing structure.³

7.3 The Committee touched on the cross-subsidy issue in Phase I of the inquiry. It became more prominent in Phase II with an apparent implied view in some quarters that customers in high-cost groups were lucky to be cross-subsidised and therefore should not complain too loudly about deficiencies in the Telecom service to them. The whole issue of cross-subsidy has also become prominent in the public eye during the course of the inquiry because of political and public debate.

7.4 In Phase I, the Committee recommended that:

Telecom should continue to accept its responsibility for subsidising loss-making activities, e.g. rural services. Cross-subsidisation is consistent with Telecom's social obligations to the community and should be maintained.⁴

In this phase of the inquiry, the Committee examined the issues closely in the light of the more recent contributions to the debate. We found no reason to change our earlier view.

²David W. Pearce, ed. *The Dictionary of Modern Economics*, Macmillan, London, 1983, by contrast, defines cross-subsidy as, '...the funding of *losses* in one line of business from monopoly gains on other products sold by the firm' (emphasis added).

³Submission No. 496, p. 25.

⁴*Ringling in the Changes*, p. xiii

How Big is the Cross-Subsidy?

7.5 It is often said in business that costing is a science while pricing is an art. The science of costing, however, has not coped well with the notion of cross-subsidy. To assess the level of subsidy it is necessary both to know the amount of revenue raised in each area of the telecommunications system and the cost of servicing each area. Telecom can readily assess the former. The costs of servicing each area, however, are extraordinarily difficult if not impossible to relate directly to that area. This is because some 40% of telecommunication costs are joint costs, or costs which relate to more than one area. It is very difficult to apportion these costs fairly between areas and, as a further complication, there is intense debate among economists on which types of costs should even be included in calculating the cross-subsidy.⁵

7.6 As a result of these complications, there are various estimates of the size of the cross-subsidy to rural and remote customers. Telecom and the Committee have engaged in a productive exchange on this issue as the two phases of the inquiry developed. Recognising the importance of factual information in this area, the Committee recommended in Phase I that:

Telecom should review its cost allocation procedures so that its profits and losses on individual services can be more clearly identified. Profit and loss information on individual services should be provided in Telecom Annual Reports.⁶

In response to this, and to requests for information by the Committee, Telecom undertook a major national study of its profitability by district. This, for the first time, provides a solid factual base for the debate.

7.7 Telecom's study shows that \$459m of its revenue from metropolitan areas was used to meet part of the indirect costs attributed to non-

⁵H. Ergas, *Telecommunications and the Australian Economy: Report to the Department of Communications*, AGPS, Canberra, 1986, pp. 103-4.

⁶*Ringling in the Changes*, p. xiv.

metropolitan areas. This represents an average cross-subsidy of \$259 per year to each of 1 560 000 telephone services in non-metropolitan areas. The subsidy in some areas is, of course, much higher, exceeding \$1000 per service in one district in western Queensland. In making this estimate, Telecom has had to make certain assumptions on the allocation of costs between districts. The size of the estimated subsidy to rural and remote users depends on how these assumptions are made.⁷

The Economic Case for Cross-subsidisation

7.8 Whatever the accounting difficulties, the Committee still supports the present cross-subsidy for a number of reasons. Firstly, it is crucial to distinguish between 'cross-subsidy' and 'profitability'. Telecom customers in high-cost areas are not necessarily unprofitable for Telecom. They contribute less per service than users in low-cost districts but their contribution to Telecom's revenue is still positive. Non-metropolitan customers of Telecom in 1984-85 paid for all the direct costs incurred in their districts as well as for \$433.8m of Telecom's total indirect costs. As the largest component of these indirect costs relates to items such as interest on borrowings, which are not necessarily directly attributable to non-metropolitan areas, the loss of all rural and remote Telecom customers would in fact impose a net additional cost on metropolitan users.⁸ Rural and remote users contribute towards Telecom's indirect costs and any contribution to these costs is better than none.

7.9 A further benefit to the system provided by urban and remote users which may be offset against the costs of their service lies in what economists call an 'access externality'. Put simply, this means that the value of a telecommunications system to any particular user will increase as the total number of users with whom he or she can communicate increases. The more subscribers there are to the telephone system the more use it is to each one of them because it gives access

⁷See Appendix XI

⁸Appendix XI

to more other subscribers. This benefit may not fully match the additional costs incurred in servicing non-metropolitan areas but it is nevertheless a partial offset against the cost.

7.10 The alternatives to cross-subsidisation generally proposed do not, it is true, usually envisage removal of all non-metropolitan customers from the system. Rather it is suggested that charges payable by them should rise to fully cover the direct and indirect costs of providing their telephone service. If any subsidy is considered necessary to alleviate the effects of this, it should be given openly as an item in the Commonwealth budget.

7.11 Serious practical problems arise with this approach. If charges are increased without subsidy, the use of the telephone system in rural and remote areas will decline. Telecom will therefore lose the contribution towards its costs currently made by customers it has priced out of the market. The remaining customers may each be paying a fairer proportion of the costs but this greater equity will be small consolation if the new, equitable rate proves to be higher than the previous rate. Even if there is a net saving to surviving customers by pricing some cross-subsidised users out of the system, it will be much less than the estimated \$459m subsidy. Whatever saving there might be will be further eroded by the loss to all remaining users of the benefit of a larger system, the 'access externality'.

7.12 If, on the other hand, the cross-subsidy is replaced with a direct subsidy provided annually in the budget, there are different problems. Mr Henry Ergas, a Principal Administrator with the Organisation for Economic Co-operation and Development (OECD) in Paris, listed these in a report to the Department of Communications made after the Committee's Phase I report was tabled. In short, the cross-subsidy, is financed by telephone usage charges which equate to a tax on telephone usage. For a number of economic reasons, this is in fact a more efficient way of funding the subsidy than would be other

sources of Government revenue such as income tax. Provided a subsidy is considered justified, Mr Ergas concluded that the cross-subsidy would be the most economically efficient way of providing it.

7.13 Perhaps the greatest advantage of the cross-subsidy over direct subsidies through the budget is in the area of administration. The cross-subsidy costs virtually nothing to collect and distribute. It is financed by charges which are almost impossible to avoid. If it were to be replaced by a direct subsidy, complex negotiations would be needed each year to set its level. The difficulty of placing a precise value on the present cross-subsidy has been discussed. Beginning from this disputed base, it would be necessary to place a value on the needs and circumstances of every non-metropolitan district. Following the probably extended and costly haggling that this would involve would be significant administrative costs in disbursing whatever subsidy was eventually determined.

7.14 Like Mr Ergas, the Committee concluded that, if a subsidy is justified, it is preferable that it be provided as a cross-subsidy rather than directly through the budget. Opposition to the cross-subsidy, if it were justified, would therefore imply its removal without replacement and, consequently, higher costs for Telecom customers in non-metropolitan areas. As discussed earlier, there are economic arguments against such a policy but there are also compelling social arguments.

The Social Arguments for the Cross-subsidy

7.15 The Ergas report points out that it is generally considered desirable in OECD countries that there should be subsidised access by the rural and remote population to telecommunications services. It concludes that the estimated level of the subsidy in Australia is 'broadly in line with those for other advanced economies.'⁹ Most

⁹Ergas, p. 104.

governments of comparable nations, like successive Australian governments for many years, have concluded that there are valid social reasons for subsidising non-metropolitan telephone services and that a cross-subsidy is the most efficient way of doing so.

7.16 Many of the specific social arguments for the subsidy to rural and remote users have been canvassed, both in this report and in the Committee's Phase I report. Among other features, the telephone system provides a communication link which may literally save lives in rural and remote areas. It provides, for many rural and remote users, the only practical method of communication between their home and the outside world. As one authority on telecommunications policy concluded:

... telephone administrations have historically tended to price the subscription service below its costs. They and the parliamentary bodies that approve their rates have justified this policy in terms of making telephone services widely available ensuring that it is affordable by economically disadvantaged groups etc.¹⁰

Access to telecommunications has become so important to so many aspects of modern life that lack of access by any group can be regarded as a serious disadvantage. Affordable telecommunications now approach the status of a right in industrialised societies.

Control of Cross-subsidies

7.17 Despite the arguments above, many economists and others concerned with public policy remain opposed to the use of cross-subsidies. Perhaps their principal objections are the lack of visibility of the subsidy and the possibility that it might lead to resources being allocated less efficiently than would a system of full market pricing. The Committee fully shares the first concern and understands

¹⁰B. M. Mitchell, 'The Cost of Telephone Service', *Telecommunications Policy*, 7, 1, March 1983, pp. 53-63.

the second. We believe, however, that administrative measures could be taken which will prevent any adverse results of the subsidy. We further believe that these measures would be preferable to the only alternatives: complete removal of the cross-subsidy or its replacement with a cumbersome and administratively costly direct subsidy.

7.18 Visibility is a problem with the cross-subsidy because, unlike a direct subsidy, the Parliament and the Government cannot be expected to make rational decisions on the allocation of public resources without knowing what the current distribution is. Subsidies that are hidden within the accounts of a public authority like Telecom may be overlooked when the allocation decisions are made, leading to higher allocations to some groups than was intended. In addition, hidden subsidies may grow without the public becoming aware of their extent. The Committee accepts that visibility is an essential requirement if the cross-subsidy is to continue.

7.19 As noted earlier, the Committee recommended in Phase I that Telecom provide profit and loss information on each service annually. The national profitability study produced by Telecom for Phase II provides an excellent model for such a reporting system. The study, which is reproduced in Appendix XI, fully exposes the size and direction of the subsidy. While conceding that estimates of costs by district may need refining with experience the Committee believes that regular production of such information would resolve the visibility problem. The costing problem, it should be noted would arise in a more pronounced way if the cross-subsidy was removed and Telecom required to calculate either a full market rate of charge or a direct subsidy for each district.

7.20 The Committee therefore recommends that:

Recommendation 18: Telecom should produce its district profitability study on an annual basis for inclusion in its Annual Report. This information

should provide details of district revenues, direct expenses, indirect expenses and a summary of the allocation rules used to apportion the indirect costs.

7.21 The efficiency of resource allocation is a more complex problem. Holding prices for some services at an artificially low level may encourage patterns of investment, both by Telecom and its customers, which are less efficient than would occur if market forces applied. The Committee notes this problem but does not believe that the scale of the subsidy to non-metropolitan areas, as revealed by Telecom's district profitability study, is sufficient to have serious effect. We do not believe that the efficiency effects of the cross-subsidy to rural and remote users are great enough to outweigh its social benefits.

7.22 A more serious aspect of the efficiency problem is the effect that all cross-subsidies might have on Telecom's operational efficiency. Most economists would agree that cross-subsidies could not survive in a competitive market. Telecom would not be in a position to finance low mark-ups on some services with high mark-ups on others if competitors were able to undercut its prices on the high mark-up services. The absence of competition which permits this form of subsidy may itself be a cause of lower efficiency in Telecom operations. If any effort was to be made to improve Telecom's efficiency by encouraging competition, the scope for cross-subsidy would be reduced.

7.23 There is now some evidence that competition is spontaneously emerging in some areas of Telecom's responsibility with the development of new technology. New methods of electronic document and data transfer, for example, may very well cut into segments of Telecom's market if it is unable to reduce the prices of its competing services. Changes to Telecom's pricing strategy have already reflected this.

7.24 It is important to repeat at this point that the cross-subsidy to rural and remote areas is not the only one existing in Telecom pricing. If the overall level of cross-subsidy is to be reduced, subsidies to metropolitan private users at the expense of business users would be as much in question as the transfers to rural and remote customers. The social effects of any change in Telecom's cross-subsidies could be very substantial. The Committee is convinced that these effects should not be allowed to develop so as to have serious impact on socially disadvantaged groups. Any such effects should be balanced against the perceived benefits of greater competition before policy is decided.

7.25 Not enough is known about these potential social effects. The Committee found no evidence that Telecom was giving adequate weight to such considerations in its planning. We consider it necessary that these factors be considered and discussed openly to avoid any unplanned and undesirable social effects of Telecom's adaption to technological change and its quest for efficiency. The Committee therefore recommends:

Recommendation 19: When restructuring its tariffs, Telecom should assess the distributional and overall social impact of its measures and report to the Parliament on the results.

Cross-Subsidy Involving Data Transmission

7.26 The 1982 Report of the Committee of Inquiry into Telecommunications Services in Australia (the Davidson Report) noted that a wide variety of cross-subsidies existed in the Australian telecommunications system.¹¹ That Committee, among other recommendations, supported the introduction of timed local calls to eliminate a perceived cross-subsidy from trunk call users to local call users. Although not

¹¹Australia, Parliament, *Committee of Inquiry into Telecommunications in Australia, Report*, (J. A. Davidson, Chairman), Parl. Paper 328, Canberra, 1982.

supporting this recommendation, or accepting the reasoning underlying it, the Expenditure Committee was concerned by one factor which influenced the Davidson Committee in its inquiry.

7.27 The Davidson report points out that the increased use of data transmission technology will lead to a greater incidence of lengthy calls. In an increasing number of cases, data transmission technology may result in the Telecom network being used to connect data processing or transmitting devices for continuous periods of several hours or more. As this usually occurs within metropolitan areas, the charge for this extensive use of Telecom resources would generally be a single local call charge.

7.28 The Davidson Committee saw this trend as an important justification for the introduction of timed local calls, reporting that:

With the increasing development and use of facsimile and 'videographic' services which may involve lengthy calls, timed local calls will be necessary to relate pricing directly to usage.¹²

The Expenditure Committee rejects the argument for general introduction of timed local calls. However we recognise the inequity involved with increasing use of the telecommunications network for data transmission at very low rates. The Committee also notes that the continuation of such a trend might eventually create a necessity for timed local calls; a development which we believe would have adverse social effects.

7.29 The Committee therefore recommends that:

Recommendation 20: Telecom should investigate possible ways of overcoming exploitation of the switched network by data users.

¹²ibid. , p. 152.

Charging by Distance and Time

7.30 Telecommunications pricing structures have generally related costs to distance. Charges within local calling zones have not usually been timed while long distance rates have tended to increase rapidly with distance. Technological advances, however, have steadily reduced the importance of distance as a cost factor.¹³ Telecom has taken account of this by progressively reducing STD charges and eliminating distance steps in the charging scale. The Committee notes, however, that Telecom's charging policy is still based on distance and time. Because of the decreasing importance of distance as a cost factor, this policy requires review.

7.31 The Committee therefore recommends that:

Recommendation 21: Telecom should examine the factors on which its pricing policy as it applies to long distance charges is based with a view to giving full consideration to the decreasing importance of distance.

The Future of Cross-subsidies to the Rural and Remote Sector

7.32 The Committee's review of this issue has shown that the present level and direction of cross-subsidy to rural and remote users can be justified. The purported benefits of reduction or elimination of the subsidy have not been shown as sufficiently great as to outweigh the costs. The Committee therefore recommends that:

Recommendation 22: Telecom should reaffirm its policy of cross-subsidising the rural and remote sector.

¹³Ergas, p. 107.