

Management of Telecommunications Services in Selected Agencies

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During the period that the report was in final production, responsibility for the administrative functions of the Department of Administrative Services was assigned to the new Department of Finance and Administration. References in the report to the Department of Administrative Services and the Department of Finance now refer to the Department of Finance and Administration.

Canberra ACT
23 October 1997

Dear Madam President
Dear Mr Speaker

In accordance with the authority contained in the *Audit Act 1901*, the Australian National Audit Office has undertaken a performance audit of Telecommunications Services in Selected Agencies. I present this report and the accompanying brochure to the Parliament. The report is titled *Management of Telecommunications Services in Selected Agencies*.

Yours sincerely

P. J. Barrett
Auditor-General

The Honourable the President of the Senate
The Honourable the Speaker of the House of Representatives
Parliament House
Canberra ACT

The Auditor-General is head of the Australian National Audit Office. The ANAO assists the Auditor-General to carry out his duties under the Audit Act to undertake performance audits and financial statement audits of Commonwealth public sector bodies and to provide independent reports and advice for the Parliament, the Government and the community. The aim is to improve Commonwealth public sector administration and accountability.

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Abbreviations

Australian National Audit Office	ANAO
Australian Bureau of Statistics	ABS
Australian Customs Service	ACS
Australian Securities Commission	Securities
Australian Sports Commission	Sports
Australian Telecommunications Users Group	ATUG
Common use contract	CUC
Department of Administrative Services [Procurement and Contracting Division was called <i>Purchasing Australia</i> until September 1997]	DAS
Data Envelopment Analysis	DEA
Department of Employment, Education, Training and Youth Affairs	DEETYA
Department of Communications and the Arts	DOCA
Department of Finance	DOF
Department of Health and Family Services	DHFS
Department of Immigration and Multicultural Affairs	DIMA
Department of Primary Industries and Energy	DPIE
Department of Social Security	DSS
National Library of Australia	NLA
Office of Government Information Technology	OGIT
Private Automatic Branch Exchange	PABX
Subscriber trunk dialling (a national long distance telephone service product using the public network)	STD

Part One

Summary and Recommendations

**During the period that the report was in final production,
responsibility for the administrative functions of the
Department of Administrative Services was assigned to
the new
Department of Finance and Administration.
References in the report to the Department of
Administrative Services and the Department of Finance
now refer to the Department of Finance and**

Summary

Introduction

1. Telecommunications services used in Commonwealth agencies encompass voice and data transmission, specialist transmission such as radio and video conference communications and facilities management. At agency level, they underpin the delivery of Government programs, facilitating client contact, information transmission, funds transfers and broad access to information by individuals and groups in the community. Increased levels of customer service are now able to be provided in the areas of information provision, information collection and financial transactions.
2. The Office of Government Information Technology (OGIT) has estimated that in 1995-96 Commonwealth expenditure on telecommunications carriage services was at least \$383 million. In addition, there is substantial expenditure by agencies on services such as technical support for their networks, contracted management support for their telecommunications facilities and Internet arrangements.
3. Whole-of-government arrangements involve the centralised negotiation of terms and conditions under which a range of products and services are made available to agencies by a number of suppliers¹. Price, terms and conditions reflect the aggregate volume of services procured across the Commonwealth. In the 1996-97 Budget context, the Government required all Commonwealth departments and budget-dependent agencies to use mandated whole-of-government

¹ The whole-of-government approach is intended to aggregate buying power across the Commonwealth; encourage the development of technologies and services in information technology and telecommunications; encourage interoperability of suppliers' services; provide incentives for infrastructure development relevant to the delivery of government services in regional areas; and use leverage with telecommunications suppliers for improved service to the Commonwealth.

agreements for carriage services and to comply with their terms and conditions.

Audit approach

4. The ANAO objectives for the audit were to report on the efficiency and effectiveness of selected agencies' management of telecommunications services. The specific purpose was to :

- identify the potential for more effective management of telecommunications services;
- consider the appropriateness of Commonwealth agencies' management of telecommunications services to take advantage of technological opportunities; and
- identify the elements of sound administration in the management of telecommunications services.

5. This audit dealt with the management of telecommunications services in a range of small to medium sized agencies and the relationships between those agencies and OGIT. The audit criteria addressed agencies' performance against benchmarks of sound administrative practice in relation to procurement; planning; business process re-engineering; financial management; and performance management. Ten small to medium sized agencies² were selected to illustrate a variety of operating environments, patterns of utilisation of telecommunications services, business orientations and geographical dispersion. The audit focussed primarily on telecommunications services, as distinct from capital items and equipment.

Audit conclusions

6. The audit's conclusions, outlined below, flow from the audit objectives to assess the adequacy of

² The agencies were Australian Bureau of Statistics, Australian Customs Service, Australian Securities Commission, Australian Sports Commission, Austrade, Department of Communications and the Arts, Department of Health and Family Services, Department of Immigration and Multicultural Affairs, Department of Primary Industries and Energy and the National Library of Australia.

agencies' management of their telecommunications services and their use of telecommunications to add value to their business operations, and to identify the elements of sound practice in the management of telecommunications services. The conclusions also address anomalies in the implementation of the prevailing whole-of-government arrangements for telecommunications services as these anomalies impact on the selected agencies' management of their telecommunications resources.

What we learnt

Whole-of-government arrangements

7. Four of the ten selected agencies reported to the ANAO that, in the first half of 1996-97, they were able to access lower prices through using either private lines (which are not covered by whole-of-government arrangements) or pre-existing arrangements for carriage service products available outside the whole-of-government arrangements.
8. The ANAO supports the proposed evaluation in 1998 of OGIT's whole-of-government telecommunications arrangements, to ascertain whether the expected outcomes, including savings arising from these arrangements, were actually achieved.
9. Information deficiencies resulted in OGIT providing some anomalous estimates of agencies' usage of whole-of-government telecommunications services, which the Department of Finance used to calculate \$7.5 million reductions in agencies' running costs in 1996-97, and some \$70 million in subsequent outyears. Several of the selected agencies advised the ANAO that they have not achieved benefits from the whole-of-government arrangements equivalent to their running cost reductions in 1996-97.

Agency management

10. Agencies' processes for the procurement of telecommunications services across the selected agencies were generally adequate given the current environment of transition from monopoly supply to whole-of-government arrangements in a deregulated environment. Notwithstanding this, procurement guidance should match the contemporary telecommunications procurement environment. As well, model contracts for services outside the whole-of-government arrangements would assist improved administration.

11. The selected agencies' telecommunications managers would be assisted to carry out their functions more effectively by enhanced access to support services, including training in relation to negotiation and contract management; access to information and other assistance in relation to client service issues; coordinated dissemination within government of information on products, services and better practices; and the establishment of government telecommunications users groups to exchange information and develop skills.

12. In any realignment or outsourcing of telecommunications management functions, agencies should retain an effective strategic telecommunications management capability, linked to their planning and performance management processes. Where information management processes are lacking, agencies may not have the capability to assess fully whether any proposed arrangements for comprehensive packages of managed telecommunications services would provide value for money.

Technologies

13. The use of telecommunications to support business process re-engineering is evident in the selected agencies, having regard to their business needs and organisational characteristics. In view of the relatively short life span of products and technologies, there is need for agency program managers to be more

informed about the potential of telecommunications technologies and services to contribute to the achievement of agencies' business objectives; the range of telecommunications services available to support business processes; and the costs and benefits of various services. This would enable a more strategic use of telecommunications services required to support business processes and program delivery.

Key Findings

Information Management

14. Accurate and comprehensive information about the total value of telecommunications services purchased by Commonwealth agencies was not available. However, expenditure of at least \$383 million in 1995-96 in relation to carriage services has been estimated by OGIT, on the basis of extrapolation from information it has received from suppliers. OGIT has instigated reporting arrangements with suppliers which are expected to yield comprehensive information about the value of whole-of-government telecommunications services for the Commonwealth.

15. Some of the selected agencies lack information management systems which capture agency-level information about their telecommunications services, including global expenditure figures. Nearly half of the selected agencies had difficulty in estimating their annual expenditure on telecommunications services.

Whole-of-government services

16. At the time of the audit fieldwork, not all the selected agencies had accessed non-price benefits under the prevailing whole-of-government arrangements. This indicates a need for alignment between the arrangements for whole-of-government

services and incentives for agencies to participate in them. Increased promotion by OGIT of the non-price benefits to agencies of its whole-of-government arrangements is critical to the success of those arrangements. This awareness-raising should be supported by ongoing monitoring by OGIT of the impacts of whole-of-government arrangements on the overall efficiency of telecommunications services at agency level.

Procurement skills

17. OGIT and DAS should collaborate to inform and advise agencies in the areas of contract negotiation, contract management and client services, including through establishment of an information forum for telecommunications managers.

Planning

18. The selected agencies have generally developed telecommunications strategic plans. However, agencies' planning processes for telecommunications services were not integrated with their business planning, risk management or performance management of outsourced functions. The ANAO considers that the resourcing of telecommunications planning should be broadly commensurate with the expected returns on an agency's investment in telecommunications through the value added to business by telecommunications-based processes.

19. OGIT has not confirmed with the selected agencies the need to update their planning of their telecommunications services, nor requested information about their telecommunications-related business needs and priorities. The estimation of future demand for services by all Commonwealth agencies could be better planned if OGIT took account of agencies' business needs and priorities, as articulated in agencies' telecommunications plans, in its development of whole-of-government strategies for

telecommunications services. This could involve OGIT inviting agencies to submit plans to it, in addition to client liaison activity which OGIT initiated during the course of the audit.

Billing arrangements

20. All of the selected agencies have experienced billing anomalies. Any billing anomalies connected to the supply of services involve a cost to agencies in terms of the direct costs of staff time and contracted services, as well as costs associated with re-directed productivity. There would be value in a whole-of-government approach that documents any billing anomalies, which in themselves have cost implications for the agencies concerned.

Cost signals

21. Efficient patterns of telecommunications use by business units can be encouraged through the provision of cost signals which raise managers' awareness of telecommunications as a resource which warrants prudent management. The majority of the selected agencies 'charge-back' to their business units to recover actual call costs.

Agencies' procedures

22. The selected agencies generally have in place physical systems which limit inappropriate access to telecommunications services by external parties or staff. Reimbursement of the costs of personal use of telecommunications facilities and services is not actively pursued in the selected agencies. Each percentage point of decrease in the Commonwealth's national long distance call costs (for example, STD or similar services), as a result of more effective management of usage, would translate on a whole-of-

government basis to a saving of \$1.6 million per annum, based on OGIT's estimate of Commonwealth expenditure on carriage services in 1995-96.

Performance management

23. All of the selected agencies undertake some performance measurement and monitoring but they focus on inputs rather than business outcomes. The selected agencies do not systematically capture information to support evaluation of the productivity benefits, including savings, accruing from use of selected services. Measurement by agencies of the impact of their selected telecommunications services on program performance would enable better understanding of the contribution of telecommunications services to their business and support informed decisions in agencies' selection from the range of available services. There could be significant benefits if OGIT facilitated the adoption by agencies of a quantitative approach to benchmarking telecommunications use and its contribution to the achievement of business objectives, including through identifying and disseminating core benchmarking parameters.

Periodic reviews

24. Comprehensive reviews of telecommunications services (termed 'audits' of services) have been a cost-effective means of identifying potential efficiencies for most of the selected agencies, for example through removing redundant services or rectifying billing errors. The ANAO considers that they should be undertaken periodically in all of the selected agencies.

Recommendations

Set out below are the ANAO's recommendations with Report paragraph references and abbreviated responses from the agencies. The ANAO considers that the recommendations should have broad application to all Commonwealth agencies. Detailed responses by the selected agencies are shown in the body of the report. The ANAO considers that agencies should give priority to Recommendations Nos 2, 3, 5, 8, 9 and 10

- | | |
|--|--|
| Recommendation No.1
Para. 2.25 | <p>The ANAO recommends that OGIT together with DAS:</p> <ul style="list-style-type: none">a) consult with a cross-section of agencies to provide procurement guidance which reflects the contemporary institutional framework for whole-of-government arrangements; andb) prepare model contracts for any significant telecommunications services not currently covered by the whole-of-government arrangements or common-use contract arrangements (for example, arrangements associated with site sharing by agencies). <p><i>Agree:</i> ABS; ACS; Austrade; DOCA; DHFS; DIMA; DPIE; NLA; Securities; Sports; and DAS.</p> <p>Agree with qualification: OGIT.</p> |
| Recommendation No.2
Para. 2.32 | <p>The ANAO <i>recommends</i> that agencies establish information management systems that enable reporting on their expenditure and patterns of use; support procurement, planning and management processes related to telecommunications services across the agency; and facilitate comparisons within and across agencies.</p> <p><i>Agree:</i> ACS, DOCA; DHFS; DIMA; DPIE; NLA; Securities; Sports; and OGIT.</p> <p>Agree with qualification: ABS and Austrade.</p> |
| Recommendation | <p>The ANAO <i>recommends</i> that OGIT monitor the impacts of whole-of-government arrangements on</p> |

No.3
Para. 2.52

the overall efficiency of agencies' telecommunications services and increase its promotion to agencies of the non-price benefits of whole-of-government arrangements for telecommunications services.

Agree: ABS; ACS; Austrade; DOCA; DHFS; DIMA; DPIE; NLA; Securities; Sports; and OGIT.

Recommendation No.4
Para. 2.84

The ANAO *recommends* that OGIT and DAS collaborate in establishing forums for Commonwealth users of telecommunications services, to assist and encourage managers with responsibility for telecommunications improve their skills base through the exchange of information, particularly as it relates to whole-of-government services; supplier relations; products and services; contract negotiation; contract management; and client service.

Agree: ABS; ACS; Austrade; DOCA; DHFS; DIMA; DPIE; NLA; Securities; Sports; DAS; and OGIT.

Recommendation No.5
Para. 3.10

The ANAO *recommends* that agencies integrate their telecommunications planning with their business planning and risk management to ensure their telecommunications services effectively support the delivery of program outcomes.

Agree: ABS; Austrade; DOCA; DHFS; DIMA; DPIE; NLA; Securities; Sports; and OGIT.

Agree with qualification: ACS.

Recommendation No.6
Para. 3.18

The ANAO *recommends* that OGIT:

a) advise agencies what is required of them in

order to comply with the Government's direction to agencies in relation to planning of their telecommunications services; and

b) take account of agencies' business needs and priorities as they relate to telecommunications services, in its development of whole-of-government strategies.

Agree: ACS; Austrade; DOCA; DHFS; DIMA; DPIE; NLA; Securities; Sports; and OGIT (a).

Agree with qualification: ABS and OGIT (b).

**Recommendation
No.7**

Para. 3.37

The ANAO *recommends* that:

a) OGIT develop material suitable for dissemination by managers with responsibility for telecommunications to the managers of agencies' business units about the potential of telecommunications to support business process re-engineering. Such material should recognise the different needs and capabilities of small and large agencies; and

b) agencies ensure that the managers of their business units receive appropriate information and training to take advantage of the potential of telecommunications to contribute to the achievement of agencies' business objectives, and about the range of telecommunications services available to support business processes and program delivery.

Agree: ABS, ACS; Austrade; DOCA; DHFS; DIMA; DPIE; NLA; Sports; and OGIT (b).

Agree with qualification: Securities and OGIT (a).

**Recommendation
No.8**

Para. 4.10

The ANAO *recommends* that:

a) agencies institute systems for reviewing supplier accounts, recording any instances of apparent

overcharging and undercharging and advising OGIT of indicative costs of any overcharging and undercharging, for use in its negotiations with suppliers; and

b) OGIT identify, and incorporate in its whole-of-government arrangements with suppliers, contractual incentives to improve the accuracy of supplier billing for telecommunications services.

Agree: ABS; ACS; Austrade; DOCA; DHFS; DIMA (b); DPIE; NLA; Securities; Sports; and OGIT.

Agree with qualification: DIMA (a).

**Recommendation
No.9**

Para. 4.33

The ANAO *recommends* that agencies:

a) implement cost management strategies, including consideration of charge-back of telecommunications costs to business units and call trend monitoring, as appropriate to the size and nature of each agency; and

b) develop codes of conduct regarding use of facilities and ensure that all staff are informed regularly about agency policies in relation to the use of telecommunications.

Agree: ABS; ACS; Austrade; DIMA (b); DOCA; DHFS; DPIE; NLA; Securities; Sports; and OGIT.

Agree with qualification: DIMA (a).

**Recommendation
No.10**

Para. 4.47

The ANAO *recommends* that:

a) agencies develop frameworks for monitoring the outcomes of their use of various telecommunications services including, where

appropriate, productivity impacts of the use of the selected telecommunications services and savings achieved through their use;

b) agencies develop and implement internal and external benchmarking strategies for telecommunications use and management; and

c) OGIT facilitate, through the provision of advice, the adoption by agencies of a quantitative approach to benchmarking telecommunications use, including through identifying/establishing and disseminating core benchmarking parameters.

Agree: ABS; ACS; Austrade (c); DHFS; DIMA; DPIE; NLA; Securities; and Sports.

Agree with qualification: Austrade ; DOCA; and OGIT (c).

**Recommendation
No.11**

Para. 4.54

The ANAO *recommends* that agencies conduct periodic audits of their telecommunications technical services and infrastructure and document the efficiencies implemented through that activity.

Agree: ABS; ACS; Austrade; DHFS; DIMA; DPIE; NLA; Securities; Sports; and OGIT.

Agree with qualification: DOCA.

Part Two

Audit Findings and Conclusions

During the period that the report was in final production, responsibility for the administrative functions of the Department of Administrative Services was assigned to the new Department of Finance and Administration. References in the report to the Department of Administrative Services and the Department of Finance now refer to the Department of Finance and Administration.

1. Introduction

This chapter outlines the nature of the Commonwealth's telecommunications services and the audit approach.

Background

1.1 Telecommunications services are significant areas for audit coverage because of their essential contribution to efficient and effective program delivery of services to clients.

Telecommunications, together with complementary information technologies, are used by agencies to redesign or re-engineer business processes, to leverage improvements in productivity and lower the costs of inputs. They have been an important source of productivity improvements and cost savings.

1.2 Telecommunications services used in Commonwealth agencies may be grouped as:

- **Voice telephony** encompassing local and long distance calls within Australia and internationally (using facilities such as direct dial³, operator-assisted

arrangements and leased lines), facsimile transmission and mobile call transmission; and facilitating services (such as call centres, voice messages, incoming call streaming, queue management for callers and national links between agencies' sites).

- **Data communications** encompassing a wide range of applications for the transmission of data (such as electronic mail, electronic funds transfer and data transfer).
- **Specialist transmission** encompassing satellite, microwave and radio transmission, pagers, video conferencing, and services such as the Internet.
- **Administrative and management services** which support agencies' use of telecommunications facilities and systems.

³ For example subscriber trunk dialling (STD) calls.

1.3 Managers are expected to position their agencies to take advantage of opportunities available in an increasingly deregulated telecommunications sector⁴, while complying with contemporary whole-of-government arrangements. Against this background, Commonwealth agencies are required to choose the most appropriate mix of telecommunications services from a range of competing suppliers and services. In managing this selection, their procurement and management processes need to be cost effective, accountable and recognise technological opportunities. Accordingly, agencies require management systems which enable timely and flexible responses to opportunities in an environment of considerable change.

Commonwealth expenditure

1.4 The Office of Government Information Technology (OGIT) has estimated Commonwealth expenditure on telecommunications carriage

⁴ Substantial deregulation of the telecommunications sector came into effect in July 1997, following progressive deregulation since the early 1990's. The *Telecommunications Act 1997*, which is the core of a legislative package, regulates the industry, particularly carriers and carriage service providers, and places obligations on suppliers to benefit consumers and the general community.

services⁵ of at least \$383 million⁶ in 1995-96. In addition, there is substantial expenditure by agencies on services such as technical support for their networks, contracted management support for their telecommunications facilities and Internet arrangements⁷.

1.5 Telecommunications services in agencies underpin the delivery of Government programs, facilitating client contact, information transmission, funds transfers and broad access to information by individuals and groups in the community. Increased levels of customer service are now able to be provided in the areas of information provision, financial

⁵ Carriage services for voice, data and facsimile transmission beyond a site and across a network are supplied by either a carrier or a service provider as defined under the telecommunications legislation.

⁶ OGIT's estimate is based on an extrapolation from supplier information provided to it. It includes transmission through cable and satellite, some facility management and termination equipment supplied by carriers and it excludes customer-owned equipment and the costs of contracted technical and management services at agency level.

⁷ All of the selected agencies access the Internet. Internet use involves the costs of connection and use (including the costs of access to commercial data bases). The ANAO is currently undertaking an audit of Internet security (separate from this study), to provide assurance to Parliament as to the effectiveness of security procedures in agencies and provide guidance to assist agencies in establishing a secure Internet connection or reviewing current practices and procedures surrounding the secure use of the Internet.

transaction and information collection⁸.

1.6 Telecommunications services are managed in various areas of the selected agencies, reflecting the separate development of telephony and information technology. Voice communications and facilities management are often managed together, in a separate unit from those which manage data communications and Internet services.

1.7 Exhibit 1.1 details proportional expenditure on various services in 1995-96 across all Commonwealth agencies which use whole-of-government arrangements for their carriage services, and for which aggregate estimates were available from OGIT⁹. Comparable information was not available to the ANAO from all the selected agencies, due as much to the way in which

transmissions are carried and charged as to the adequacy of their information management systems.

1.8 Data transmission is estimated by OGIT to account for 26 per cent of agencies' expenditure on whole-of-government services and voice transmission services for some 74 per cent of the agencies' expenditure on carriage services (see Exhibit 1.1, all services other than 'data'). Around half of the expenditure on voice transmission was represented by national long-distance calls¹⁰. The relativities between voice and data communications costs are changing as a result of the convergence of telecommunications and information technology and the increasing use of data communications as an integral part of business processes¹¹.

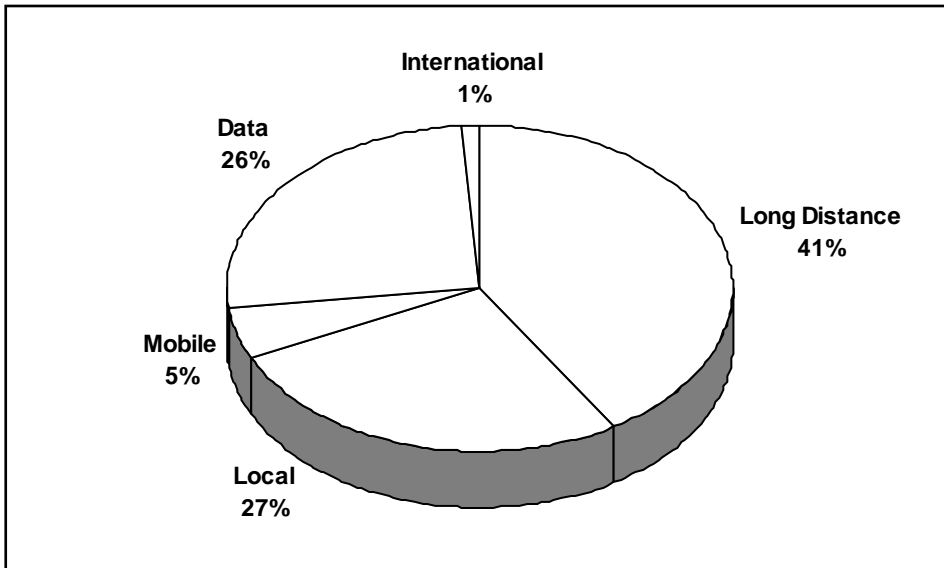
⁸ Examples include Internet access to information; electronic mail; national telephone numbers; call centres covering programs across Commonwealth portfolios; video-conferencing; data exchange; and funds remittance using telephone-assisted electronic banking.

⁹ OGIT advised the ANAO that in 1995-96, whole-of-government services accounted for around 50 per cent of Commonwealth expenditure on telecommunications carriage services. In May 1997, OGIT advised the ANAO that the whole-of-government expenditure for 1995-96 was \$201.5 million. Data and mobile services, the services experiencing greatest growth in terms of traffic volume, are often purchased outside the whole-of-government arrangements.

¹⁰ ATUG/Monash University, *Finding Best Practice: Report of a Multi-Client Telecommunications Management Research Project*, April 1995, reports that a sample of public and private sector organisations reported average distribution of expenditure as: telephony (voice and facsimile) 55 per cent; data 33 per cent; and other services such as video, private radio and pagers 12 per cent.

¹¹ For example, the proportion of all recurrent telecommunications expenditure represented by data services in the National Library of Australia was 75 per cent - reflecting its business processes.

Exhibit 1.1:
Estimated proportional whole-of-government expenditure by
service
type in 1995-96



Note: Based on OGIT's reported actual expenditure under whole-of-government arrangements in 1995-96 of \$201.5 million.

Source: OGIT

1.9 Finding: Accurate and comprehensive information about the total value of telecommunications services purchased by Commonwealth agencies was not available. However, expenditure of at least \$383 million in 1995-96 in relation to carriage services has been estimated by OGIT, on the basis of extrapolation from information it has received from

suppliers. OGIT has instigated reporting arrangements with suppliers which are expected to yield comprehensive information about the value of whole-of-government telecommunications services for the Commonwealth.

Commonwealth agencies

1.10 The roles of OGIT¹² and the Procurement and Contracting Division of the Department of Administrative Services (DAS) and those of line agencies are summarised in Exhibit 1.2.

OGIT, which coordinates all Commonwealth Government information technology and telecommunications, was established to provide leadership to agencies in relation to information technology; identify and promote solutions to address common requirements across agencies; and promote a 'lead agency' concept. In that context it is responsible for the planning and procurement environment for telecommunications for Commonwealth agencies.

1.11 The ANAO was advised by OGIT that:

the role of OGIT needs to be clearly understood, especially as it relates to the establishment of whole-of-government arrangements for telecommunications. OGIT's

focus is on the collective needs of agencies for particular services. Agency needs are identified through a range of processes including user forums, agency visits, and telecommunications planning information provided by agencies.

1.12 OGIT is currently developing a number of initiatives to give effect to its charter, including whole-of-government arrangements for the procurement of carriage services¹³ and Internet access services, a virtual voice network for Commonwealth agencies, and a pilot project for the delivery of broad band services to agencies.

¹² OGIT was established in mid 1995 within the Finance portfolio. Prior to its establishment, CommTel, which had been a part of the Department of Administrative Services, had administered a whole-of-government arrangement for carriage services between 1993 and 1995. OGIT's aim, as advised to the ANAO, is to establish a telecommunications environment for the Commonwealth which will enable Commonwealth agencies to obtain affordable and effective advanced communications services which provide connectivity for data, voice, video and multi-media services.

¹³ OGIT advised the ANAO that it has commenced discussions with Purchasing Australia and State Governments for the development of contracts for the outsourcing of various telecommunications activities and a module for the procurement of telecommunications services under the common-use arrangement for information technology.

Exhibit 1.2:
Current institutional framework for telecommunications services

Source: ANAO

1.13 There are some arrangements which fall outside both the whole-of-government and common-use arrangements outlined above. These include shared use by agencies of facilities and services, arrangements for an agency to on-sell services to a tenant agency which uses part of its network or arrangements for facilities management in cases where a suitable common-use arrangement does not exist (see chapter 2).

Audit approach

1.14 The objectives for the audit were to report on the efficiency and effectiveness of selected agencies' management of telecommunications services. The specific purpose was to :

- identify the potential for more effective management of telecommunications services;
- consider the appropriateness of Commonwealth agencies' management of telecommunications services to take advantage of

technological opportunities;
and

- identify the elements of sound administration in the management of telecommunications services.

1.15 The audit focussed primarily on telecommunications services as opposed to capital items and equipment. Ten small to medium sized agencies¹⁴ were selected to illustrate a variety of operating environments, patterns of utilisation of telecommunications services, business orientation and geographical dispersion. Exhibit 1.3 provides telecommunications profiles of the agencies selected for this audit. The total reported telecommunications expenditure for the ten selected agencies was some \$40 million in 1995-96. Among the agencies selected for this audit, telecommunications services accounted for an average of some two per cent of agencies' operating costs in 1995-96.

1.16 The fieldwork for the performance audit was undertaken between September 1996 and May 1997. Two questionnaires, developed in

accordance with the audit objectives and criteria, were sent to each of ten selected agencies (see Exhibit 1.3) in October 1996 and February 1997. The information obtained from the questionnaires was used in the production of a series of issues papers which formed a focus for discussions with agencies.

1.17 The ANAO also held discussions with OGIT and DAS to clarify a range of issues pertaining to the implementation of whole-of-government arrangements for the procurement of telecommunications services.

1.18 The audit criteria were derived from a review of the literature on telecommunications issues, consultation with telecommunications specialists and industry representatives, discussions with Commonwealth and State Governments' central coordinating agencies, and fieldwork undertaken as part of a preliminary study conducted in three selected agencies. The audit criteria addressed agencies' performance against benchmarks of sound administrative practice in relation to procurement; planning; business process re-engineering; financial management; and performance management.

¹⁴ The agencies were Australian Bureau of Statistics, Australian Customs Service, Australian Securities Commission, Australian Sports Commission, Austrade, Department of Communications and the Arts, Department of Health and Family Services, Department of Immigration and Multicultural Affairs, Department of Primary Industries and Energy and the National Library of Australia.

Exhibit 1.3
Selected agencies' profiles and expenditure on
telecommunications,
1995-96

Agency	Staff numbers	Operatin g costs (a) \$m	Telecomm's expenditure (b) \$m	Telecomm' s expenditur e as % of operating costs
Australian Bureau of Statistics (ABS)	3227	244.45	4.48	1.83
Australian Customs Service (ACS)	4627	448.54	7.41	1.65
Australian Securities Commission (Securities)	1398	104.94	3.18	3.03
Australian Sports Commission (Sports)	420	57.91	0.63	1.09
Austrade	1188	184.64	7.31	3.96
Department of Communications & the Arts (DOCA)	567	52.06	0.76	1.46
Department of Health & Family Services (DHFS) (c)	6179	335.13	6.27	1.87
Department of Immigration & Multicultural Affairs (DIMA) (d)	3997	364.23	6.66	1.83
Department of Primary Industries & Energy (DPIE)	3918	196.57	2.12	1.08
National Library of Australia (NLA)	539	42.91	1.19	2.77
TOTAL	26 060	2031.38	(e) 40.01	1.97

Notes:

- (a) As reported by agencies to the ANAO, includes employees expenses and other administrative expenses. Excludes expenditure related to staff in some parts of organisations which are separately funded, such as the Australian Archives within the Department of Communications and the Arts and the Australian Geological Survey Organisation within the Department of Primary Industries and Energy.
- (b) As reported by agencies to the ANAO, includes cost of calls and service charges, cost of data transmission external to site, Internet access and satellite services, salaries and wages of personnel, consultants, fixed costs (costs of lines) and operator costs. Excludes the costs of services in some parts of organisations which are separately funded (see above). Excludes capital expenditure.
- (c) The figure for telecommunications expenditure is an estimate by the agency, based on known expenditure for its data traffic nationally and voice communications in its central office, and an extrapolation from whole-of-government expenditure figures.
- (d) The figure for telecommunications expenditure is an estimate by the agency, based on known expenditure on national data and central office voice transmission, and estimated regional offices' voice transmission costs.
- (e) The selected agencies' expenditures on telecommunications are affected by the nature of their business and organisational characteristics. Higher levels of expenditure on telecommunications may indicate business process re-engineering based around telecommunications, with attendant productivity benefits.

Source: ANAO based on information provided by selected agencies and agencies' Annual Reports for 1995-96.

1.19 In the course of the audit the ANAO engaged the following consultancy services:

- the **Centre of Policy Studies, Impact Project, Monash University**, which provided advice in relation to benchmarking techniques;
- **Vistel Ltd** (subsequently Telstra Statenet Facilities Management), which provided advice on better practices in relation to telecommunications planning and management;
- the **Australian Bureau of Statistics Statistical Consultancy Unit**, which provided preliminary advice on questionnaire design; and
- **Consultel Australia Pty Ltd**, which provided advice on both telecommunications data and broader issues in telecommunications management in the government (Commonwealth and State) and the private sectors.

1.20 The ANAO appreciates the assistance of the telecommunications managers and their colleagues in each of the ten selected agencies. In particular, the ANAO would like to express its appreciation for the assistance of the personnel of the Department of Primary

Industries and Energy, the Department of Immigration and Multicultural Affairs and the Australian Bureau of Statistics, OGIT, our consultant advisers and the various State and Territory Governments and industry groups consulted.

1.21 The cost of the audit was approximately \$435 000. The audit was conducted in accordance with ANAO Auditing Standards.

1.

2. Procurement

This chapter outlines the context in which agencies procure their telecommunications services. The audit found that the selected agencies would benefit from guidance in relation to the contemporary procurement environment for telecommunications services.

Background

2.1 Sound administration in the procurement of telecommunications services involves conformance with the Commonwealth Procurement Guidelines and Finance Regulations and Directions relating to, among other things, value for money in procurement. At agency level¹⁵, procurement systems are required to ensure value for money, competition, fairness and ethical conduct, as well as making explicit the obligations on each party to contractual arrangements.

2.2 On the basis of available data for telecommunications

expenditure in 1995-96, Telstra accounted for some 86 per cent of the selected agencies' expenditure on carriage services, and other suppliers some 14 per cent¹⁶. The 'other' category includes suppliers of fixed, mobile and paging services and other host agencies acting as suppliers in cases of collocated agencies sharing a network (in which cases, the carrier mix was not known). In addition to the negotiation of supply arrangements with suppliers of carriage services, the selected agencies contract for facilities management and Internet access services and a variety of other value-added consultancy services¹⁷.

¹⁵ The *Financial Management and Accountability Act 1997* specifies the responsibilities and powers of persons who are chief executives of agencies and, as such, are responsible for management and performance of their agencies. Section 44 of the Act specifies the responsibility of a chief executive to manage the affairs of the agency in a way that promotes the proper (efficient, effective and ethical) use of the Commonwealth's resources.

¹⁶ For some of the selected agencies, there was considerable difference between the figures reported by agencies and those provided by OGIT related to agency expenditure in 1995-96.

¹⁷ These services include maintenance and relocations of physical infrastructure; operator and help-desk services; call traffic analyses and diagnostic checks; telephone information

Other government approaches

2.3 A whole-of-government environment for telecommunications services is evolving. OGIT's implementation of Commonwealth whole-of-government arrangements for telecommunications services has the benefit of observation of a whole-of-government approach to telecommunications services by overseas governments, notably the United States Government, and the experience of several Australian State and Territory Governments' approaches.

2.4 While not all Australian State and Territory Government arrangements are defined as mandatory, core agencies are expected to use whole-of-government arrangements. Most of these strategies rely on buying capacity rather than building physical networks and are generally moving towards multi-supplier arrangements.

2.5 In the United States, two supply contracts were awarded by the United States General Services Administration in 1988, for intercity telecommunications nationwide. The United States scheme, known as FTS 2000, is mandatory on executive

management software programming; identification of billing anomalies in supplier accounts; and advice on telecommunications business solutions.

agencies, unless agencies are granted an exemption¹⁸. The General Accounting Office reported to the Congress in 1996¹⁹ on its comparison of the costs incurred by a sample of agencies. It had found mixed results: some costs of services under the whole-of-government network were comparable with costs of services negotiated independently by agencies, some services cost less and some cost more. Also, the General Services Administration found that, overall, the whole-of-government arrangement, FTS 2000 serves the requirements of the United States Government in the most cost-effective manner available²⁰.

Whole-of-government arrangements

2.6 In the 1996-97 Budget context, the Government required all Commonwealth departments and budget-dependent agencies to use mandated whole-of-government agreements²¹ for

¹⁸ A number of entities including foreign affairs, defence, postal and treasury agencies and the legislature have obtained exemptions (or partial exemptions) from compliance.

¹⁹ General Accounting Office Telecommunications: FTS 2000 Cost Comparison: Report to Congressional Requesters, May 1996.

²⁰ General Services Administration Report to Congress on the Cost Effectiveness of the FTS 2000 program, July 1996.

²¹ The Government affirmed whole-of-government arrangements which had

carriage services and to comply with their terms and conditions. OGIT has advised the ANAO that it is also implementing whole-of-government arrangements for 'managed' telecommunications services²².

2.7 The whole-of-government approach is intended to aggregate buying power across the Commonwealth; encourage the development of technologies and services in information technology and telecommunications; encourage interoperability of suppliers' services; provide incentives for infrastructure development relevant to the delivery of government services in regional areas; and use leverage with telecommunications suppliers for improved service to the Commonwealth. The Department of Finance advised the ANAO that:

the whole-of-government telecommunications arrangements, which were enhanced and expanded by the Government in the 1996-97 Budget, are an important part of the framework under which

agencies need to operate. However, these arrangements are not intended to shift primary responsibility for efficient and effective management, procurement and use of telecommunications away from agencies.

2.8 The Commonwealth's arrangements for whole-of-government carriage services have been conveyed to agencies in letters from OGIT and through seminars. Agencies using telecommunications products outside whole-of-government telecommunications arrangements are expected to move to whole-of-government products, although they are permitted to complete existing contracts which fall outside whole-of-government arrangements.

2.9 The ANAO was advised by OGIT that it expects agencies to be attracted to whole-of-government products and to benefit through lower prices (derived from commitment to volumes) and administrative efficiencies flowing from its overall management of supply arrangements; negotiation of service arrangements; and its payment, on behalf of all participating Commonwealth agencies, of the subscription costs for Commonwealth participation in various suppliers' tariff and service plans.

2.10 The whole-of-government arrangements afford small

operated between 1993 and 1995; extended the scope of the scheme to include separate legal entities; and gave agencies full entitlement to savings generated under the whole-of-government arrangements. (Agencies previously retained only 50 per cent of the tariff savings.)

²² 'Managed' telecommunications services involve the provision of hardware, transmission and facilities management services as a package of services.

agencies benefits of economies of scale which would not be available to them in their own right. In addition, benefits are expected to accrue across agencies from other projects which OGIT is undertaking, such as its development of a strategy to reduce the costs associated with the processing of invoices for carriage services to Commonwealth agencies; its development of model tender processes for the procurement of totally managed services; and its collection of information about proprietary systems available for the audit of telecommunications networks. The non-price aspects of whole-of-government arrangements are discussed later in this chapter.

2.11 The ANAO was advised by OGIT that its:

role has been to implement whole-of-government arrangements covering the range of telecommunications requirements which agencies have. This process is complete in respect of the bulk of agency requirements. This is not to be confused with the fact that take-up by agencies of these arrangements has not been to the exclusive level mandated by the Government. Agencies are responsible for ensuring compliance within their own accountability frameworks. It should be noted that OGIT will continue to implement further whole-of-government arrangements to address new

requirements or new services which become available.

2.12 The benefit of the whole-of-government arrangements could be constrained by some agencies' abstention from the arrangements for at least some of their services. The ANAO was advised by OGIT that there are currently no processes in place to enforce compliance with the mandated arrangements for whole-of-government telecommunications services and their terms and conditions. Nor was there guidance issued to agencies as to how and when they were to complete their transition from the old to the new arrangements.

2.13 The ANAO was advised by OGIT that it:

informed agencies of their responsibility to comply with the Government decision to use whole-of-government arrangements exclusively. The onus is on the agency to comply with the Government. This implementation method is consistent with the standard practice in government purchasing (for example the mandatory use by agencies of common-use arrangements). Over eighty per cent of agencies are now using whole-of-government arrangements. Agency transfer from existing contracts to exclusive use of whole-of-government arrangements continues as the existing contracts expire. Budget-funded agencies have

been contacted by OGIT on numerous occasions to encourage their complete participation in the arrangements.

2.14 The ANAO recognises OGIT's actions to advise agencies of the whole-of-government arrangements. However, the ANAO considers that OGIT should formally advise agencies of its timetable for the completion of their migration to whole-of-government arrangements for all services. Further, OGIT has a responsibility to monitor the implementation of the Government's endorsed approach for whole-of-government telecommunications services.

OGIT savings

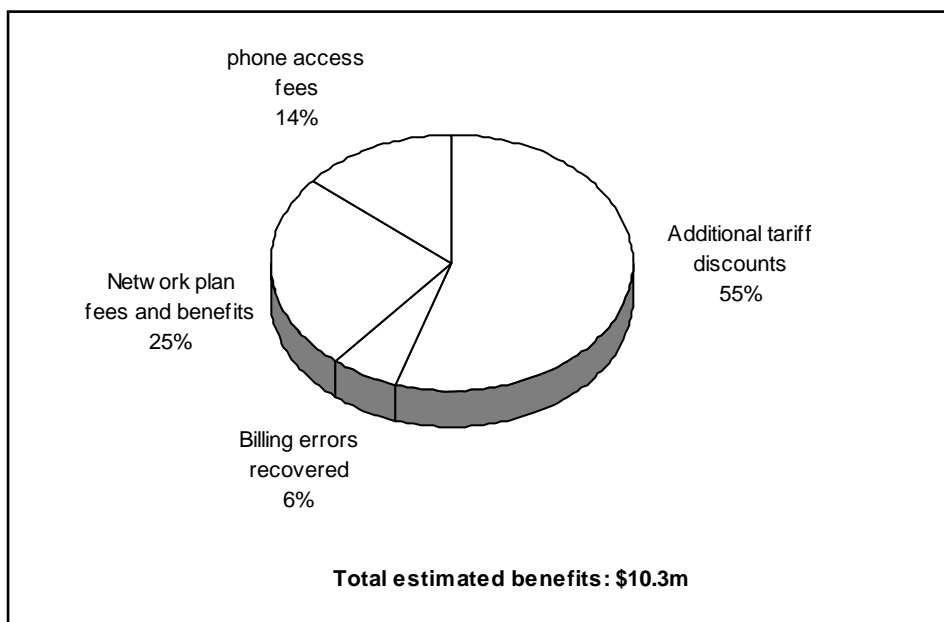
2.15 OGIT is implementing contractual frameworks (Head Agreements) with suppliers to establish common costs and conditions across Commonwealth agencies for selected products in voice and data carriage services²³. It is envisaged that agencies will activate contractual arrangements through supply orders, with minimum supply periods set by the Head Agreement.

2.16 OGIT advised the ANAO that in 1996-97, it expended around \$3.3 million on its operational costs related to whole-of-government telecommunications arrangements; and, from this, it generated some \$10.3 million of savings and other direct financial benefits across the Commonwealth (see Exhibit 2.1). In addition, indirect benefits are expected to accrue to the Commonwealth.

²³ OGIT advised the ANAO in April 1997 that it recognises the merit of a multi-supplier framework and that it intends to use multiple suppliers for its whole-of-government services.

Exhibit 2.1:

OGIT estimate of whole-of-government direct savings by service in 1996-97



Source: OGIT

2.17 Some of the selected agencies questioned OGIT's estimates of benefits, when attributed at agency level, on the basis that they had, through their own efforts, achieved tariff discounts, resolved billing anomalies and negotiated favourable terms and conditions.

2.18 It is essential to agencies' administrative effectiveness that the whole-of-government scheme which OGIT is implementing is well managed and subject to periodic review. Evaluation of

OGIT's whole-of-government arrangements is scheduled for 1998, within the evaluation plan for the Finance portfolio.

2.19 Finding: The ANAO supports the proposed evaluation in 1998 of OGIT's whole-of-government telecommunications arrangements, to ascertain whether the expected outcomes, including savings arising from these arrangements, were actually achieved.

Agencies' procurement processes

2.20 Arrangements for carriage services in the selected agencies are necessarily flexible as requirements fluctuate, particularly whenever agencies experience changes to administrative arrangements or personnel profiles. The extent to which procurement of carriage services in selected agencies was supported by a formal contracting process varied between data and voice services. The selected agencies advised the ANAO that:

- data carriage services are typically contracted after consideration of tenders;
- some voice carriage arrangements were entered into informally, sometimes under a whole-of-government purchase order or by exchange of letters; and
- facilities management and Internet access services are generally covered by contracts, in most cases by common-use arrangements.

2.21 The selected agencies' procurement procedures for carriage and other telecommunications services were considered in relation to a procurement framework (Exhibit 2.2), derived from the Commonwealth Procurement Guidelines and the

Telecommunications Strategic Planning Guidelines. The whole-of-government arrangements for telecommunications services are intended to obviate the need for individual agencies and suppliers to negotiate price and standard terms and conditions by preselecting suppliers and products.

2.22 Several of the selected agencies expressed reservations regarding OGIT's initiative to establish panels of suppliers for Internet access services, negotiated on a whole-of-government basis. Points of contention were the timing of the new arrangement, which postdates agencies' negotiating individually for the service, thereby potentially wasting the resources they had invested in their processes; delays expected in accessing common supply arrangements; and the difficulty of establishing appropriately durable supply conditions in a rapidly changing market²⁴.

²⁴ The ANAO is separately conducting, at OGIT's request, a probity audit of the evaluation process being used by OGIT for its potential Internet whole-of-government access panels.

Exhibit 2.2

Telecommunications Services Procurement Elements

<i>Procurement stages</i>	<i>Agency actions</i>
Planning	<ul style="list-style-type: none"> Consider corporate objectives, strategies and business drivers and telecommunications' potential role to help achieve them. Analyse the policy, regulatory, technological, market and financial contexts, for opportunities, threats and possible future directions. Determine telecommunications needs, current and future, in consultation with stakeholders.
Functional statement	<ul style="list-style-type: none"> Decide procurement method, including funds allocation. Develop an implementation plan, taking account of growth potential and relevant issues. For example, security and privacy. Document and obtain approval for the intended procurement and implementation processes; establish milestones and key performance indicators. Develop specification of needs based on functions and performance needed by the user/s.
Contract conditions	<ul style="list-style-type: none"> Ensure skills and training for accredited procurement staff; and be consistent in handling suppliers and their bids. Establish contract conditions. Obtain appropriate legal advice. Obtain approval of documentation. Obtain approval to invite proposals (unless delegations apply). Establish evaluation criteria to assess proposals.
Invitation to bid	<ul style="list-style-type: none"> Invite proposals, noting that it would be unfair dealing to give one supplier's prices to another supplier to meet or beat. Close invitation process. Document events.
Evaluation & negotiation	<ul style="list-style-type: none"> Evaluate bids, including non-financial aspects, for 'value for money'. Negotiate with prospective suppliers. Record all discussions, and document all reasons and decisions. Select preferred supplier. Obtain approval to award contract.
Contract execution	<ul style="list-style-type: none"> Execute contract or effect whole-of-government/common-use arrangement. Debrief unsuccessful bidders. Publish details of supply agreement in the Commonwealth (Purchasing and Disposal) Gazette. Monitor and manage legal conformance with contract.
Implementation of procurement plan and contract administration	<ul style="list-style-type: none"> Monitor supply arrangements and strategic implementation. Liaise regularly with supplier and stakeholders to ensure compliance. Administer contract until completion.

Source: ANAO based on Commonwealth Procurement Guidelines and CommTel's Telecommunications Strategic Planning Guidelines

2.23 Agencies' procurement activities varied, reflecting their transition from earlier, single supplier provision of services to multiple suppliers, compounded by exposure to whole-of-government arrangements which had at different times in recent history been mandatory and elective, and are presently mandatory. Some of the services used in the selected agencies fell outside whole-of-government arrangements, such as arrangements for shared use of facilities between several of the selected agencies and other agencies. It would assist efficient management at agency level if these arrangements followed a standard form.

2.24 Finding: Agencies' processes for the procurement of telecommunications services across the selected agencies were generally adequate given the current environment of transition from monopoly supply to whole-of-government arrangements in a deregulated environment. Notwithstanding this, agencies need procurement guidance which matches the contemporary telecommunications procurement environment. As well, model contracts for services outside the whole-of-government arrangements would assist improved administration.

Recommendation No.1

2.25 The ANAO *recommends* that OGIT together with DAS:

- a) consult with a cross-section of agencies to provide procurement guidance which reflects the contemporary institutional framework for whole-of-government arrangements; and
- b) prepare model contracts for any significant telecommunications services not currently covered by the whole-of-government arrangements or common-use contract arrangements (for example, arrangements associated with site sharing by agencies).

2.26 Agencies responded to the recommendation as follows:

- *Agree:* ABS; ACS; Austrade; DOCA; DHFS; DIMA; DPIE; NLA; Securities; Sports; and DAS.
- *Agree with qualification:* OGIT.

2.27 Specific comments by agencies are set out below.

- *DAS response:* Agree. DAS develops and issues the Commonwealth Procurement Guidelines. Once the guidelines for the procurement of telecommunications services are developed, it would be efficient to incorporate them into the Commonwealth Procurement

Guidelines. DAS currently administers common-use contract arrangements that cover telecommunications facilities management services (PE65) and information technology specialist/business consulting services (PE68).

- **OGIT response:** Agree with qualification. The Department of Administrative Services (DAS) generally has responsibility for the preparation of standard contracts for government purchasing. With telecommunications contracts, OGIT has assisted agencies in their procurement activities and in the promotion of best practice, and will continue to do so. OGIT is working collaboratively with Purchasing Australia (now the Procurement and Contracting Division of DAS), the Australian Information Industry Association and State Governments to develop Government Information Terms and Conditions.

2.28 ANAO comment: The ANAO considers that there are roles for both DAS and OGIT in supporting common approaches by agencies in their telecommunications procurement and management. Adoption of this recommendation would promote the economies arising from good practice across

agencies, through the issuing of procurement guidance by OGIT .

Decentralised management

2.29 The manner in which carriage services are procured by the selected agencies depends on the extent of agencies' decentralisation. Data carriage services are procured centrally for all of the selected agencies. Responsibility for procurement of voice services in four of the selected agencies is devolved to business units, regional offices and international posts, although whole-of-government arrangements are negotiated for the agency globally. Mobile telephones are procured and managed at business unit level in all of the selected agencies. Other transmission services and some facilities management are procured at site level in some of the decentralised agencies.

2.30 An implication of decentralised procurement is decentralised information management. Two of the selected agencies were unable to identify their total expenditure on telecommunications services. Considerable effort was required by a further two of the selected agencies to identify their expenditure.

<p>2.31 Finding: Some of the selected agencies lack information management systems which capture agency-level information about their</p>
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telecommunications services, including global expenditure figures. Nearly half of the selected agencies had difficulty in estimating their annual expenditure on telecommunications services.

Recommendation No.2

2.32 The ANAO *recommends* that agencies establish information management systems that enable reporting on their expenditure and patterns of use; support procurement, planning and management processes related to telecommunications services across the agency; and facilitate comparisons within and across agencies.

2.33 Agencies responded to the recommendation as follows:

- *Agree*: ACS, DOCA; DHFS; DIMA; DPIE; NLA; Securities; Sports; and OGIT.
- *Agree with qualification*: ABS and Austrade.

2.34 Specific comments by agencies are set out below.

- *ACS response*: Agree. It is within the larger agencies where implementation of this recommendation will derive maximum financial benefit to the Commonwealth. Management information on telecommunications usage

and costs will be available from the outsourcer.

- *DHFS response*: Agree. DHFS already utilise information management systems for the management of telecommunications costs and planning purposes.
- *DPIE response*: Agree. Practices are already in place with the exception of across agencies comparisons, as acknowledged by ANAO. Agree to implement across agencies comparisons subject to availability of information from other agencies or OGIT.
- *Securities response*: Agree. This is supported, although Securities would need to further analyse the merits of comparisons across agencies, given obvious differences in their nature of business, business requirements, size and extent of decentralisation.
- *ABS response*: Agree with qualification. Supported with the proviso that the need for comparison across agencies should not lead to onerous reporting requirements.
- *Austrade response*: Agree with qualification. This is agreed noting that there will need to be OGIT-level coordination and support. Due recognition will need to be given to the costs involved to collect this information.

Due to the variety and uniqueness of suppliers and lack of relevance to other agencies, it is recommended overseas posts not be included in any comparisons.

2.35 ANAO comment:

Adoption of this recommendation would improve the quality of information available to agency managers as a basis for their management of telecommunications and for evaluation of the efficiency and effectiveness of their management approaches.

Price, terms and conditions

2.36 On the basis of available information, half of the selected agencies calculated that, at the midpoint of 1996-97, they procured over 90 per cent by value of either their voice and data carriage services or both, under whole-of-government arrangements.

2.37 All of the selected agencies use products and plans covered by the whole-of-government arrangements to meet at least part of their transmission needs. While still effectively in transition to mandatory whole-of-government arrangements at the midpoint of 1996-97, four of the selected agencies were either using private lines (which are not

covered by whole-of-government arrangements) or continuing their existing supply arrangements for some products available at competitive prices outside the whole-of-government arrangements.

2.38 Lack of clear and comparable pricing and cost information from suppliers can make it time-consuming and costly for agencies to determine the net cost of services and the cost-effectiveness of supply options. The ANAO was advised by OGIT that it expects deregulation of the telecommunications industry to result in the introduction of simpler tariff schemes based on usage and volume, rather than distance-dependent structures.

2.39 The ANAO was advised by OGIT that it now proposes to refine its agreements with suppliers, to achieve whole-of-government benefit, while allowing suppliers to offer particular agencies solutions tailored to specific agency requirements. OGIT intends to ensure there are commercial incentives for agencies to use the whole-of-government arrangements, including allowing suppliers to offer a hierarchy of costs and benefits to agencies. A hierarchy of costs and benefits would enable suppliers to establish niche markets within the wider whole-of-government market. OGIT has indicated that, as a result, some agencies could

be expected to benefit from more flexible supply options.

Value for money

2.40 The Finance Regulations and Directions require agencies' managers to achieve value for money and to spend money in accordance with the policies of the Commonwealth²⁵. Managers need to balance the requirement on agencies to comply with mandatory arrangements approved by the Government and the requirement that agencies achieve value for money in the application of resources available to them.

2.41 In the absence of instructions by OGIT to agencies as to how they were to manage their transition to the new, mandatory arrangements, agencies' continuation of existing, favourable

arrangements could be seen as sound management of their resources.

2.42 Agencies cited examples of arrangements available outside the whole-of-government framework that cost significantly less than the net cost to the agency of a whole-of-government arrangement. For example, the net costs²⁶ of three minutes of transmission using the various tariff plans were calculated by managers in seven of the selected agencies as:

- for a **Canberra-Sydney** connection, ranging between 18 cents and 62 cents; and
- for a **Canberra-Washington** connection, ranging between \$1.74 and \$3.57²⁷.

2.43 In each category, the lowest cost option lay outside whole-of-government arrangements²⁸. The cheapest

²⁵ Finance Direction 44A requires that a person not approve a proposal to spend public moneys unless satisfied that: a) the proposal is in accordance with the policies of the Commonwealth; and b) the proposed expenditure will make efficient and effective use of the public moneys available for the Commonwealth programs implementing those policies. Section 44 of the *Financial Management and Accountability Act 1997* requires a chief executive of an agency to manage the affairs of the agency in a way that promotes proper use of the Commonwealth resources for which s/he is responsible. If compliance with the requirements of the regulations, Finance Minister's Orders, Special Instructions or any other law would hinder or prevent the proper use of those resources, the chief executive must manage so as to promote proper use of those resources to the greatest extent practicable while complying with those requirements.

²⁶ The cost of a whole-of-government service to an agency is calculated on a basis of a price discounted in relation to the volume of the service used by the Commonwealth and that agency's proportional contribution to the aggregate Commonwealth traffic.

²⁷ Industry Commission, *International Telecommunications Reform in Australia*, June 1997, reported that the average cost of all international calls from Australia was \$1.11 in 1995-96. It predicted that average costs could reduce by more than half, following deregulation of the market.

²⁸ In the selected agencies which provided call costings, whole-of-government services provided three minute telephone calls to Sydney at costs upward of \$0.36 and a three minute telephone call to Washington at costs upwards of \$2.82. Local calls were not covered under whole-of-government

national long distance transmission was by a private line and the cheapest international connection used an international call-back service.

2.44 Finding: Four of the ten selected agencies reported to the ANAO that, in the first half of 1996-97, they were able to access lower prices through using either private lines (which are not covered by whole-of-government arrangements) or pre-existing arrangements for carriage service products available outside the whole-of-government arrangements.

2.45 The Department of Finance advised the ANAO that:

evaluating results of whole-of-government arrangements for the first half of 1996-97 during the transitional phase will not provide definitive conclusions as agencies may not be able to use a product or service that more adequately met their business needs under the whole-of-government arrangements until their pre-existing contractual obligations are extinguished.

2.46 The ANAO recognises that it is too early to reach definitive conclusions on the effectiveness of whole-of-government arrangements. This is an issue that can be canvassed fully in the scheduled

1998 evaluation of OGIT's whole-of-government telecommunications arrangements.

2.47 OGIT considers that all savings and any reported price disadvantages of whole-of-government products and services need to be amortised across the Commonwealth. As such, its perspective of 'value for money' differs from those of some of the managers in the selected agencies who manage the tension between an immediate cost increase for services, and an expectation of economies deriving from new ways of doing business as whole-of-government products and services evolve.

Non-price factors

2.48 The price benefits of aggregation of demand are forecast by OGIT to diminish after 1998-99, by which time other non-price benefits are expected to be in effect. For example, simplified billing structures and improved infrastructure and services will be negotiated on the basis of the aggregated buying power of the Commonwealth. Administrative benefits have been forecast by OGIT to flow to agencies from these initiatives.

2.49 The ANAO was advised by OGIT that, within the whole-of-government framework, agencies offering definite volumes and

exclusivity may achieve better deals by seeking improvements to whole-of-government conditions for their particular agency. Several of the selected agencies advised the ANAO that they could achieve, independently, non-price benefits comparable with, or better than, those available under whole-of-government arrangements. This indicates a need for alignment between the arrangements for whole-of-government services and incentives for agencies to participate in them.

2.50 Increased promotion of the non-price benefits of whole-of-government arrangements by OGIT, based on an understanding by OGIT of the impacts of whole-of-government arrangements on the economy and effectiveness of telecommunications services at agency level, could encourage greater utilisation of the whole-of-government arrangements for agencies. The ANAO was advised by OGIT that it *can, and does, advise agencies in general terms on the non-price benefits which will flow to them from accessing particular arrangements and on related procedural aspects.*

2.51 **Finding:** At the time of the audit fieldwork, not all the selected agencies had accessed non-price benefits under the prevailing whole-of-government arrangements. This indicates a

need for alignment between the arrangements for whole-of-government services and incentives for agencies to participate in them. Increased promotion by OGIT of the non-price benefits to agencies of its whole-of-government arrangements is critical to the success of those arrangements. This awareness-raising should be supported by ongoing monitoring by OGIT of the impacts of whole-of-government arrangements on the overall efficiency of telecommunications services at agency level.

Recommendation No.3

2.52 The ANAO *recommends* that OGIT monitor the impacts of whole-of-government arrangements on the overall efficiency of agencies' telecommunications services and increase its promotion to agencies of the non-price benefits of whole-of-government arrangements for telecommunications services.

2.53 Agencies responded to the recommendation as follows:

- *Agree:* ABS; ACS; Austrade; DOCA; DHFS; DIMA; DPIE; NLA; Securities; Sports; and OGIT.

2.54 Specific comments by agencies are set out below.

- *DHFS response:* Agree. OGIT has the information available direct from carriers to monitor

whole-of-government arrangements.

- *DIMA response*: Agree. While the expressed sentiment is supported, it is not clear how this may be turned into deliverables.
- *Sports response*: Agree. Sports would like to stress our agreement with this recommendation in relation to OGIT. As yet Sports has not seen sufficient evidence of the non-price benefits of whole-of-government arrangements and at no time has OGIT had discussions with Sports regarding our business needs and priorities in relation to telecommunications services. Whilst OGIT is now producing a telecommunications newsletter, this does not replace the need for agency consultation in the whole-of-government approach.
- *OGIT response*: Agree. OGIT provides management information, for example in respect of telecommunications expenditure, which measures improvements in efficiencies in agencies' telecommunications services. In addition, where opportunities arise in the context of specific initiatives, such as the recent DEEETYA/DSS contracts for managed voice services, OGIT promotes the use of more efficient and effective telecommunications services.

2.55 ANAO comment:

Adoption of this recommendation would enable OGIT to adjust its whole-of-government strategy to the needs and priorities of its clients across the Commonwealth.

Outsourcing

2.56 In addition to procuring carriage services, all of the selected agencies procure services related to aspects of the management of their telecommunications facilities.

2.57 Reflecting the varying nature of their businesses, the selected agencies have differing perspectives on which telecommunications management functions should be provided in-house or either contracted in or outsourced. Some agencies differentiate between voice and data communications in their approach to outsourcing (with the latter being seen as more difficult/problematic to outsource). In particular, agencies whose core business is highly dependent on information technology tend to regard data communications as a core business function which would be difficult to outsource.

2.58 The Australian Bureau of Statistics, Austrade and the Department of Immigration and Multicultural Affairs indicated that, owing to unique aspects of their business, certain

telecommunications functions could not be contracted or outsourced for reasons of security, strategic importance, client service or cost-effectiveness.

2.59 Only one of the selected agencies does not currently contract in/outsource telecommunications management functions. The remaining agencies use contracting in/out-sourcing to varying degrees. The Australian Sports Commission, the Department of Immigration and Multicultural Affairs and the National Library of Australia have chosen to re-insource telecommunications management functions which had previously been contracted. In the case of the National Library of Australia and the Australian Sports Commission, operator and switchboard functions have been re-insourced for cost and quality of service reasons.

2.60 During the period of the audit, the Department of Immigration and Multicultural Affairs was in the process of reversing a previous attempt to introduce a national outsourcing approach for telecommunications management, having experienced the negative effects of inadvertently isolating management from the information and systems which drive its business. This illustrates that it is essential that agencies be positioned in the market place

as informed consumers of services and that outsourcing is supported by processes to ensure that the boundaries between the agency and its supplier are clear and agency managers are informed about technological opportunities to enhance business²⁹.

2.61 The Department of Immigration and Multicultural Affairs advised the ANAO in August 1997 that it was progressing the outsourcing of its information technology infrastructure, including voice and data telecommunications, as part of a cluster of agencies. This is expected to offer potential for significant change in services provided and their management³⁰. The Australian Customs Service also advised the ANAO that it is in the process of outsourcing its information technology and telecommunications operations.

2.62 The Organisation for Economic Co-operation and Development has recently

²⁹ Risks of outsourcing are discussed in Bernard Levy, 'The Telecommunications Outsourcing Trade-off', *Australian Communications*, April 1997, pages 81-84.

³⁰ The Department of Immigration and Multicultural Affairs advised the ANAO that it is anticipated that industry will respond with a variety of offerings including managed voice services perhaps inclusive of fixed costs. The clustering of agencies offers potential for service consolidation and changed charging regimes. Agency management of telecommunications services will of course need to reflect new arrangements.

offered guidance on the effective contracting out of government services:

Effective contract management requires a new set of skills for many government organisations. Recruitment and staff training policies need to take account of this.....Organisations ..need to maintain their knowledge of the market and their technical knowledge of the activity. This is imperative in order to communicate with the contractor on equal terms and to be in a position to effectively tender the activity again³¹.

2.63 Finding: In any realignment or outsourcing of telecommunications management functions, agencies should retain an effective strategic telecommunications management capability, linked to their planning and performance management processes.

‘End to end’ services

2.64 One option in the procurement of telecommunications services is the procurement of an integrated and comprehensive package of carriage services, facilities management and hardware and equipment. Suppliers of ‘end to end’ managed services provide

and manage all of the telecommunications services connecting, as required, all agency sites; and they are responsible for equipment, network operations and service delivery. None of the selected agencies used ‘end to end’ managed services at the time of the audit.

2.65 The ANAO was advised by OGIT³² that it has supported the adoption of ‘end to end’ managed services by some lead agencies³³, which were not among the selected agencies, as possible models for other

³² OGIT advised the ANAO that there are many benefits to agencies which choose to use managed voice services. Management overheads are substantially reduced through a reduction in the myriad of maintenance contracts typically required to support agency telecommunications; invoice payments are reduced and simplified; reduced need for in-house, specialist expertise; improved budgeting for telecommunications expenditure; savings achieved through a lesser number of contract arrangements; with distance-independent tariffs, there is greater freedom in locating agency staff who provide services to clients by telephone to, for example, take advantage of attractive and less expensive accommodation options.

³³ The ANAO was advised by OGIT that during 1996-97, OGIT assisted lead agencies (Department of Social Security and Department of Employment Education and Training and Youth Affairs) to procure managed voice services (MVS). Telstra Corporation was awarded both the DEETYA and DSS contracts for MVS and as a result both agencies expect to make significant savings over the life of the contract when compared to existing arrangements. The favourable terms and conditions offered to these agencies are available to other agencies with similar profiles through whole-of-government arrangements.

³¹ Organisation for Economic Co-operation and Development, ‘Best Practice Guidelines for Contracting out Government Services’, Public Management Service Policy Brief, February 1997.

agencies. It advised the ANAO that:

Two large agencies, the Commonwealth Services Delivery Agency and the Department of Employment, Education, Training and Youth Affairs have established contracts for 'end to end' voice telecommunications services [managed voice services]. Using economies of scale generated by these two large agencies, OGIT has established whole-of-government arrangements so that these services are available to Commonwealth agencies at significantly lower cost than had ever been achievable. These lower prices are also available to small agencies which would not be able to obtain significant discounts in their own right. OGIT aims to extend the use of end to end services in the Commonwealth by using the information technology outsourcing initiative to drive the development of additional managed telecommunications services (for example, managed data).

2.66 An agency considering such an arrangement would need to identify and record its current costs and usage, as a basis for effective negotiation of the service and for performance management of the contracted service.

2.67 Finding: Where information management processes are lacking, agencies may not have the capability to assess whether any proposed

arrangements for managed telecommunications services would provide value for money.

Prepayment arrangements

2.68 At the time of the audit, three of the selected agencies participated in prepayment plans with suppliers whereby the agency agrees to maintain a prepayment account of up to \$1 million, from which call and service charges are deducted as they are incurred. Interest is earned on the prepaid funds by a supplier-managed investment and credited to the agency. Agencies report that the prepayment scheme results in an administrative cost saving associated with the processing of payments for multiple accounts³⁴.

2.69 The Department of Finance has instructed agencies that if a prepayment involves a discount of *less* than the prevailing short term borrowing rate for the Commonwealth, it does not meet the test of 'best value' *unless* the prepayment confers extraordinary administrative savings; or other

³⁴ The Australian Bureau of Statistics reported that its prepayment arrangements replace two days work by one person each month on financial processing. The Australian Customs Service reported benefits from improved budget management and more flexibility in scheduling its invoice reconciliation workload. The Department of Primary Industries and Energy advised the ANAO that it has benefited from streamlined administrative arrangements including for bill payment, through the prepayment system.

significant circumstances offset cash management considerations (Finance Direction 25C).

2.70 The prepayment arrangements in place in three of the selected agencies were supported by memoranda of understanding with the respective suppliers. These memoranda set the interest rate benefit to agencies to be calculated monthly, based on a weighted average yield of thirteen week Commonwealth Treasury Note issues for the month. Being priced to reflect the Commonwealth's own borrowing rate, these prepayment arrangements can represent value for money at the Commonwealth level when the administrative cost savings to agencies are taken into account. Nevertheless, it needs to be recognised that there is interest foregone by the Commonwealth in relation to prepayments from the Commonwealth Public Account. OGIT has advised the ANAO that it supports the use of prepayment schemes.

Budget savings

2.71 Compulsory annual telecommunications budget reductions are being applied to agencies in the form of a reduction in running costs, based on an estimate of the minimum savings which 'additional' discounts generated by the whole-of-government agreements

would return to the Budget³⁵. The extent of the net reductions (\$7.5 million across the Commonwealth in 1996-97 and some \$70 million in subsequent outyears) is substantial in several of the selected agencies³⁶.

2.72 As the volumes and value of telecommunications services procured across the Commonwealth sector were not known at the time of the 1996-97 Budget deliberations, reductions (and projected reductions to the year 2000) were based on the OGIT estimate of agencies' usage of whole-of-government

³⁵ Commonwealth agencies were advised by OGIT in August 1996 that in recognition of the reductions in department/ agency telecommunications costs generated from whole-of-government initiatives, a share of the savings are to be returned to the Budget from department/ agency running costs from 1996-97 onwards. These savings, which have been implemented as a 1996-97 Budget measure, have been broadly distributed across departments/ agencies according to estimated levels of current telecommunications expenditure. They reflect the minimum level of savings to be obtained by way of tariff reductions and other voice and data initiatives. Most departments and agencies are expected (by OGIT) to be able to make efficiency gains well above those reflected in the Budget savings which they will be able to retain.

³⁶ The Australian Customs Service advised the ANAO that the agency has reviewed the discounts achieved under the whole-of-government agreement. In Custom's case, they were substantially less than the amount the Department of Finance withheld from their budget. It is possible that this was due to Customs being an early adopter of the whole-of-government discounts and it was not taken into account when OGIT calculated Customs' forward estimates of savings.

carriage services³⁷.

Shortcomings in the base estimates include that:

- forecasts assumed agencies had used Telstra products for all services and all discounts were only obtainable through whole-of-government arrangements;
- the base included any billing anomalies which were unresolved at the time of the calculation of running costs reductions; and
- running costs reductions of those agencies which provide telecommunications services to other agencies were based on the total traffic through their site exchanges rather than reflecting the respective traffic of host and tenant agencies.

2.73 Four of the selected agencies advised the ANAO that they have not achieved benefits from the whole-of-government arrangements equivalent to their running cost reductions in 1996-97. Some of the selected agencies which had independently achieved efficiencies prior to the introduction of whole-of-government arrangements reported that they were effectively penalised because the

savings were calculated from an anomalous price and volume base in relation to usage of whole-of-government services. They advised the ANAO that the new whole-of-government arrangements did not realise cheaper telecommunications services for them at agency level because they had previously achieved economies. Agencies reported that, being unable to achieve (previously realised) savings as projected in OGIT's whole-of-government calculations, they were required to absorb running costs reductions of effectively greater magnitude than applied to other Commonwealth agencies.

2.74 Finding: Information deficiencies resulted in OGIT providing some anomalous estimates of agencies' usage of whole-of-government telecommunications services, which the Department of Finance used to calculate \$7.5 million reductions in agencies' running costs in 1996-97 and some \$70 million in subsequent outyears. Several of the selected agencies advised the ANAO that they have not achieved benefits from the whole-of-government arrangements equivalent to the running cost reductions in 1996-97.

2.75 The Department of Finance advised the ANAO that:

This confuses the impact of the Government's policy decision to

³⁷ OGIT is seeking to require suppliers to provide high level information about volumes and value of carriage services supplied to Commonwealth agencies, which is expected to improve the reliability of the information.

recover ongoing Budget savings from telecommunications efficiencies from 1996-97 with the quantitative tariff discounts delivered to the selected agencies. The claw back of the Budget savings removed the incentive for telecommunications service providers to undercut pre-existing whole-of-government agreements through private contracts with particular agencies which operated to the detriment of the Commonwealth overall. The tariff benefits flowing from the whole-of-government telecommunications arrangements in operation pre and post 1 July 1996 should be evaluated on the basis of the total savings in respect of particular agencies' services notwithstanding the fact that a share of these savings have been returned to the Budget.

2.76 The ANAO recognises that the selected agencies experienced the combined effect of running costs reductions and changes to the quantitative tariff discounts. Budget savings from whole-of-government arrangements for telecommunications were reportedly based on the estimated minimum returns from additional tariff discounts generated by whole-of-government agreements across a range of services.

2.77 The ANAO accepts that in calculating the budget savings from whole-of-government initiatives, there must be a level of approximation involved in the

estimates. It is nevertheless the responsibility of the proponent agency to be satisfied that the estimated savings included in advice to government are soundly based.

Skills needs

2.78 Telecommunications managers have a high degree of contact with a variety of suppliers for the range of telecommunications services used by agencies. The current procurement environment tests the knowledge, experience and judgement of telecommunications managers and their staff. There is potential for a degree of exposure to commercial and operational risk in agencies' dealings with suppliers if there is a significant imbalance of information and skills in favour of suppliers.

2.79 Telecommunications managers in agencies identified a broad range of desirable competencies for the effective management of telecommunications covering network management, telecommunications applications and technologies, strategic planning, project management, contract management, information management, and knowledge of industry trends and products. Some agencies also expressed a need for re-activation of central

dissemination of information of industry information (previously undertaken by CommTel) to keep them up to date as informed consumers in the market. The Australian Bureau of Statistics, Austrade and the National Library of Australia noted their reliance on the telecommunications industry participants to provide information in relation to the relative costs of telecommunications services and applications.

2.80 Finding: The selected agencies' telecommunications managers would be assisted to carry out their functions more effectively by enhanced access to support services, including training in relation to negotiation and contract management; access to information and other assistance in relation to client service issues; coordinated dissemination within government of information on products, services and better practices; and the establishment of government telecommunications users groups to exchange information and develop skills.

2.81 A role was identified for OGIT in facilitating relevant professional development and information sharing among agency telecommunications managers. The ANAO considers that agencies' telecommunications managers have a responsibility to ensure that the managers in their business units have information

about the potential of telecommunications to contribute to the achievement of agencies' business objectives, about the range of telecommunications services available to support business processes and the costs and benefits of various services.

2.82 The ANAO was advised by DAS that the competency of personnel involved in the procurement of telecommunications services would be assured if procurement staff were accredited by DAS.

2.83 Finding: OGIT and DAS should collaborate to inform and advise agencies in the areas of contract negotiation, contract management and client services, including through establishment of an information forum for telecommunications managers.

Recommendation No.4

2.84 The ANAO *recommends* that OGIT and DAS collaborate in establishing forums for Commonwealth users of telecommunications services, to assist and encourage managers with responsibility for telecommunications improve their skills base through the exchange of information, particularly as it relates to whole-of-government services; supplier relations; products and services; contract negotiation; contract management; and client service.

2.85 Agencies responded to the recommendation as follows:

- *Agree*: ABS; ACS; Austrade; DOCA; DHFS; DIMA; DPIE; NLA; Securities; Sports; DAS; and OGIT.

2.86 Specific comments by agencies are set out below.

- *DHFS response*: Agree. This recommendation will assist agencies with implementing best practice service delivery.
- *NLA response*: Agree. This recommendation assumes the existence of Commonwealth-employed telecommunications managers. The pressure on agencies to outsource information technology infrastructure may result in this position being with the agencies' information technology service provider.
- *DAS response*: Agree. As a means of information exchange collaborative forums particularly those facilitated by a third party telecommunications expert may be of benefit to Commonwealth users. To improve the skills base, we also recommend the inclusion of specific training sessions, cross-agency teams and Internet discussion groups.
- *OGIT response*: Agree. OGIT conducts forums on a range of subjects, including on subjects which assist agency staff to

develop their skills, awareness and motivation. These forums are also used to disseminate information which is valuable to agency staff in performing their various functions, including the integration of their telecommunications services with business planning and operations management activities.

2.87 ANAO comment:

Appropriate information and skills at agency level are essential to the successful integration of agencies' telecommunications services with their business planning and operations. Adoption of this recommendation would improve the effectiveness of agencies' procurement of telecommunications services by ensuring that agencies have the requisite information and skills base.

1.

3. Business Planning

This chapter considers the adequacy of agencies' planning of telecommunications services and their re-engineering of business processes using technological opportunities. Agencies would benefit from information and guidance from central agencies to obtain optimal value from their planning processes and to ensure that they are placed to take advantage of changes in the telecommunications environment.

Background

3.1 Telecommunications-assisted technologies are increasingly being used by agencies to streamline business processes, thus increasing productivity while at the same time reducing costs and improving the quality of service delivery. Examples include establishing telephone call centres to provide a single entry point for clients to perform a variety of transactions; mobile telephones to enable continuous contact outside the office; modem links with an agency's computer network to allow home-based work; the transfer, exchange and matching of data through data carriage services and via the Internet³⁸; locating

national projects in regional centres; routing calls between time zones to maximise customer interface; and communicating with clients electronically.

3.2 Whole-of-government planning of telecommunications services depends on knowledge of the characteristics, needs and articulated telecommunications plans of agencies across the Commonwealth.

3.3 At agency level, planning systems are needed to ensure that the agencies' telecommunications services facilitate the achievement of the agency's current business objectives and are anticipating future business directions and technological opportunities to re-engineer business processes.

Planning

3.4 Finance Circular 1990/3 suggested improvements to the way agencies procure and manage telecommunications equipment and services, and suggested that agencies should

³⁸ Office of the Auditor-General Western Australia, Report No 3, June 1996, *The Internet and Public Sector Agencies*, identifies issues affecting efficiency and effectiveness faced by agencies that connect to, and publish on, the Internet. The report identifies some suggested practices to reduce potential risks in the areas of security, business costs and benefits, and information management.

produce a telecommunications strategy plan. The establishment of CommTel, the forerunner to OGIT in respect of telecommunications, in the 1993-94 Budget was accompanied by a decision to require agencies to develop three-yearly telecommunications strategic plans. Telecommunications information³⁹ and Telecommunications Strategic Planning Guidelines⁴⁰ were produced in 1994 by CommTel. These were developed to ensure that agencies' telecommunications planning was sufficiently addressed within their mandatory three-yearly information technology strategic plans and to assist understanding of the telecommunications environment.

3.5 In addition to the planning guidelines, CommTel provided to agencies a reference manual on telecommunications technologies and services, access to sample outline plans for small, medium and large agencies and information on CommTel business arrangements with suppliers.

3.6 The selected agencies undertake a range of

management activities that can be considered to be telecommunications planning (although the nature and scope of these activities varies between agencies). Five agencies reported that their telecommunications planning is subsumed within a broader strategic focus on information management. Three agencies have prepared a telecommunications strategic plan in addition to their information technology strategic plan. One agency indicated that it did not have a telecommunications strategic plan (because it had focussed on data communications, its principal business medium).

3.7 CommTel's Telecommunications Strategic Planning Guidelines recommended a planning process that, among other things, drives an operational plan and matches telecommunications provision pragmatically to organisational needs and capabilities. The Guidelines noted that:

Most organisations that have undertaken a rigorous telecommunications strategic planning process have been able to achieve short-term savings well in excess of the cost of the planning activities and have introduced strategies that have enabled them to rapidly and

³⁹ Department of Administrative Services, The Telecommunications Environment: Influences on Strategic Planning, First Edition November 1994.

⁴⁰ Department of Administrative Services, Developing A Corporate Telecommunications Strategy: Telecommunications Strategic Planning Guidelines, September 1994.

*effectively adopt new services and technologies*⁴¹.

3.8 The ANAO supports the development by agencies of planning processes which facilitate achievement of their business objectives, having regard to the scale and nature of their operations. To obtain best value from telecommunications services, agencies' planning processes for telecommunications services should be integrated with their business planning, risk management or performance management of outsourced functions. The selected agencies lacked explicit planning processes to support such integration.

3.9 Finding: The selected agencies have generally developed telecommunications strategic plans. However, agencies' planning processes for telecommunications services were not integrated with their business planning, risk management or performance management of outsourced functions. The ANAO considers that the resourcing of telecommunications planning should be broadly commensurate with the expected returns on an agency's investment in telecommunications through the value added to business by

telecommunications-based processes.

Recommendation No.5

3.10 The ANAO *recommends* that agencies integrate their telecommunications planning with their business planning and risk management to ensure their telecommunications services effectively support the delivery of program outcomes.

3.11 Agencies responded to the recommendation as follows:

- *Agree:* ABS; Austrade; DOCA; DHFS; DIMA; DPIE; NLA; Securities; Sports; and OGIT.
- *Agree with qualification:* ACS.

3.12 Specific comments by agencies are set out below.

- *Austrade response:* Agree. Telecommunications is already an important part of Austrade's business planning.
- *DIMA response:* Agree. Approaches towards this goal will be influenced by DIMA's moves towards outsourcing.
- *DPIE response:* Agree. Practices are already in place, as acknowledged by ANAO.
- *Securities response:* Agree. Securities' telecommunications strategic planning is undertaken as part

⁴¹ *ibid* p1.

of its corporate information technology planning process which it translates into its corporate information technology plan (CITP) and related business plans. This CITP is driven by the Securities' strategic business directions and, to this extent, this approach has proven adequate and appropriate in aligning the telecommunications planning (as one aspect of the CITP) with Securities' corporate objectives.

- *ACS response:* Agree with qualification. ACS's approach is to continue to integrate its telecommunications strategic plan with its corporate information technology plan, to identify the business needs and put forward proposals as to how they will be satisfied. A separate telecommunications strategic plan will continue to be produced for internal use.

3.13 ANAO comment:

Adoption of this recommendation would ensure that telecommunications planning is properly identified as a major contributor to the achievement of program outcomes in agencies.

Central coordination

3.14 The ANAO was advised by OGIT that it is currently updating and revising the planning documentation originally prepared by its predecessor,

CommTel, and intends to issue revised material in 1997-98. The ANAO considers that agencies would benefit from technical assistance and guidance in relation to planning. The selected agencies, themselves, made several specific suggestions:

- Austrade commented that it would be useful to have communications network simulation and planning tools made available by an agency such as OGIT; and
- the Department of Health and Family Services advised that it does not see benefit in central agency guidance in relation to planning. However, it does see merit in a centrally-coordinated users' forum for such activities as tariff information exchange and disposal of surplus equipment, to support agencies' individual activities.

3.15 CommTel had advised agencies that their telecommunications plans would provide a significant input to CommTel's capability to arrange new or improved telecommunications products and services for Commonwealth agencies.

3.16 The estimation of future demand for services by all Commonwealth agencies could be better planned if OGIT took account of agencies' business needs and priorities, as

articulated in agencies' telecommunications plans, in its development of whole-of-government strategies for telecommunications services. This would involve OGIT inviting agencies to submit plans to it, in addition to the client liaison activity which OGIT has initiated.

3.17 Finding: OGIT has not confirmed with the selected agencies the need to update their planning of their telecommunications services, nor requested information about their telecommunications-related business needs and priorities. The estimation of future demand for services by all Commonwealth agencies could be better planned if OGIT took account of agencies' business needs and priorities, as articulated in agencies' telecommunications plans, in its development of whole-of-government strategies for telecommunications services. This could involve OGIT inviting agencies to submit plans to it, in addition to client liaison activity which OGIT initiated during the course of the audit.

Recommendation No.6

3.18 The ANAO *recommends* that OGIT:

a) advise agencies what is required of them in order to comply with the Government's direction to agencies in relation to planning of their telecommunications services; and

b) take account of agencies' business needs and priorities as they relate to telecommunications services, in its development of whole-of-government strategies.

3.19 Agencies responded to the recommendation as follows:

- *Agree:* ACS; Austrade; DOCA; DHFS; DIMA; DPIE; NLA; Securities; Sports; and OGIT (a).
- *Agree with qualification:* ABS and OGIT (b).

3.20 Specific comments by agencies are set out below.

- *ACS response:* Agree. ACS agrees that OGIT needs to disseminate this information, however acceptance will only occur if OGIT can demonstrate clear benefit to ACS in doing so.
- *Sports response:* Agree. Sports would like to stress our agreement with this recommendation in relation to OGIT. As yet Sports has not seen sufficient evidence of the non-price benefits of whole-of-government arrangements and at no time has OGIT had discussions with Sports regarding our business needs and priorities in relation to telecommunications services. Whilst OGIT is now producing a telecommunications newsletter, this does not replace the need for agency

consultation in the whole-of-government approach.

- *DIMA response*: Agree. Caution is urged regarding extensive planning coordination, noting that previous telecommunications strategic planning processes have been short on tangible outcomes.
- *ABS response*: Agree with qualification. OGIT should avoid a prescriptive approach which imposes unnecessary burdens on agencies and should recognise that telecommunications planning is subsumed in information technology planning in some agencies.
- *OGIT response*: Agree (a). Agree with qualification (b). OGIT considers agency business needs in the development of whole-of-government arrangements, for example, the development of 'end to end' managed voice services. OGIT works with agencies to assist them purchase telecommunications services within the whole-of-government framework, however it is the agency responsibility to procure and manage their telecommunications services.

3.21 ANAO comment:

Adoption of this recommendation would clarify with the selected agencies the value of

telecommunications planning as well as ensuring that OGIT takes account of agencies' business needs and priorities in its whole-of-government planning.

Adding value to business

3.22 Effective management of telecommunications services requires agencies to be prepared to take advantage of opportunities presented by technologies to redesign their business delivery processes for more economical or more effective outcomes⁴².

3.23 Most agencies address the potential application of telecommunications to business needs in the context of broader information technology planning. The establishment of business needs for information technology and data communications is more robust in most of the selected agencies than is the approach to establishing business needs for voice communications.

⁴² The Australian Sports Commission had advised the ANAO that telecommunications developments have, in some agencies, lead to a greater level of expenditure on telecommunications. Certainly in the case of the Australian Sports Commission, whilst the mobile telephone has improved efficiency particularly for coaches travelling with teams, it has also resulted in considerably higher expenditure on hardware and on calls from within Australia and overseas.

Agencies' practices

3.24 The selected agencies are using enhanced telecommunications and information technologies to redesign business processes and products and deliver improved customer services, albeit without the benefit of integration of forward business planning and telecommunications planning processes in some agencies.

3.25 Examples of business process re-engineering in the selected agencies include computer aided telephone interviewing for operational efficiency and improved client service; trial of home based work, supported by telecommunications technologies; video conferencing to reduce expenditure on fares and time associated with official travel; using a computer network to client organisations for efficiency of program delivery; business processes based on efficient telecommunications processes such as electronic data transfer, desk top facsimile capacity and voice management services; and redesign of client service around new technologies (such as computer assisted services with tandem electronic records and costs management), to cut costs and enhance communications.

3.26 The adoption of telecommunications-enabled information technologies has resulted in re-engineering of core

business processes. For example, in the Australian Bureau of Statistics, interviews of survey respondents, supported by telephones linked to computers, reduce postage and travel costs. It enables project management in any cost-effective location around Australia and operation across time zones for increased client access.

3.27 Austrade has used telecommunications to re-engineer its core business systems resulting in a shift from written and voice-based communications to automated processes based on electronic data transfer. This has contributed to Austrade reducing its domestic operations staff.

3.28 The Australian Sports Commission has established a computer network linking national sporting organisations to one another and to it, to improve the efficiency of the Commission's program delivery for sports development, including through electronic grants administration and information exchange.

3.29 The Department of Health and Family Services has used frame relay transmission of carriage services to enable the integration of voice and data transmission with considerable economies. It has found, however, that service availability to its sites around Australia has inhibited the full potential of this

technology for business process re-engineering.

3.30

The Australian Customs Service and the Department of Primary Industries and Energy have achieved substantial re-design of their program processes using telecommunications. Yet they have each identified considerable potential for ongoing re-engineering of their business processes using telecommunications services and each has identified a need for business units to understand the capabilities of telecommunications in this regard and for telecommunications needs to be corporately scoped and defined.

3.31 Matching procurement to business needs, the National Library of Australia is progressively replacing its leased line network by use of the Internet for its data transmission. The leased line network cost just under \$800 000 in 1995-96, and it is estimated to cost \$400 000 in 1997-98. It is being replaced by data transmission to external clients via the Internet at a cost to the Library \$30 000 per annum until 1998-99, when it is expected to increase to \$45 000.

3.32 In addition to the examples of business processes re-engineering outlined above, OGIT advised the ANAO of a number of initiatives that will support those processes⁴³.

⁴³ OGIT advised the ANAO that it is working with State Governments to achieve reciprocal access to each other's contracts and thus

These include the facilitation of information exchange between agencies and across governments; and the use of untimed, distance-independent, flat fees for telephone service and call charges to lead the development of electronic service delivery.

Call centres

3.33 Call centres offer the potential for agencies to meet client needs more economically and more effectively⁴⁴. Several of the selected agencies operate call centres for some of their programs. For example:

- the Australian Securities Commission handles more than 1.1 million telephone

achieve ongoing savings. OGIT has been working with the States on a range of telecommunications initiatives including Tasmania's Integrated Community Network and initiatives to provide common delivery points for government service.

⁴⁴ Benefits to business through using call centres as a hub client service include improved customer access to services; more effective servicing of call traffic, for example by allowing operators to manipulate the queue to assign priorities to particular calls and to the use of particular operators (for example, those with a particular expertise); reduced operating costs through extended use of facilities beyond traditional business hours, in conjunction with offering flexible working hours for staff and the routing of calls across time zones; access to data base information about issues of concern to the clients; potential to use telemarketing techniques; economies and improved physical security due to removal of physical contact with clients; and an option for a low-cost location of the call centre unit and routing to multi-lingual operators.

inquiries and requests for assistance each year. These calls may be directed to any of the Commission's eight regional offices and twelve metropolitan business centres or to the National 'Infoline' telephone number. Calls to that number are handled by operators at the Commission's Information Processing Centre at Traralgon, in rural Victoria;

- the Australian Bureau of Statistics used a temporary telephone inquiry and interpreter service for its 1991 Census, offering a phone-in facility to State offices of the Bureau and an interpreting service provided through the Department of Immigration and Multicultural Affairs. A review of the project identified client confusion with the option to call one of several numbers. As a result, a single call number was adopted for the 1996 Census⁴⁵, supported by outsourced Hotline and interpreting services; and
- the Department of Primary Industry and Energy's Rural Access Program links rural Australians to the range of Commonwealth Government programs by a number of means, including a national

⁴⁵ ANAO Audit Report No 35 1996-97, 1996 Census of Population and Housing: Australian Bureau of Statistics.

call centre. The program is available to distribute information as a commercial agent of other bodies. Performance information used to assure the efficiency of the service and to market the program to potential clients include that 99 per cent of calls are answered within 30 seconds (this target is currently being met) and the cost of information delivery using agency telecommunications facilities and staff.

3.34 The measure of success of a call centre is the degree to which it facilitates effective program delivery and client service⁴⁶. Key elements in effective service delivery are informed staff who are capable of dealing with the issues raised by the callers and effective linkages between the various data bases operated within the agencies to enable ready access by call centre operators.

3.35 New technologies and services are continually becoming available to agencies to underpin business processes. However, technological change is

now so fast that technologies and services might only have assured currency over two to three years, with implications for ongoing redesign of business processes. In an environment of rapid change, agencies would benefit from a greater sharing of information about, and experience with, the adoption of new technologies and processes.

3.36 Finding: The use of telecommunications to support business process re-engineering is evident in the selected agencies, having regard to their business needs and organisational characteristics. In view of the relatively short life span of products and technologies, there is need for agency program managers to be more informed about the potential of telecommunications technologies and services to contribute to the achievement of agencies' business objectives; the range of telecommunications services available to support business processes; and the costs and benefits of various services. This would enable a more strategic use of telecommunications services required to support business processes and program delivery.

⁴⁶ ANAO Better Practice Guide, *Telephone Call Centres*, December 1996 and an accompanying handbook provide guidance on the management of telephone call centres. These publications were developed following the ANAO's Audit Report No 9 1995-96, *Teleservice Centres: Department of Social Security*.

Recommendation No.7

3.37 The ANAO *recommends* that:

a) OGIT develop material suitable for dissemination by managers with responsibility for telecommunications to the managers of agencies' business units about the potential of telecommunications to support business process re-engineering. Such material should recognise the different needs and capabilities of small and large agencies; and

b) agencies ensure that the managers of their business units receive appropriate information and training to take advantage of the potential of telecommunications to contribute to the achievement of agencies' business objectives, and about the range of telecommunications services available to support business processes and program delivery.

3.38 Agencies responded to the recommendation as follows:

- *Agree*: ABS, ACS; Austrade; DOCA; DHFS; DIMA; DPIE; NLA; Sports; and OGIT (b).
- *Agree with qualification*: Securities and OGIT (a).

3.39 Specific comments by agencies are set out below.

- *Austrade response*: Agree. The recommendation that OGIT develop material for dissemination is supported. The issue of ensuring managers of business units receive appropriate information and training to take advantage of the potential of telecommunications is more complex. Recognition must be given to the need for standard corporate systems and, for this, the focus needs to be on the staff responsible for designing and implementing corporate systems.
- *ABS response*: Agree. This is supported subject to the understanding that this activity will often be combined with similar activity for other areas of information technology.
- *ACS response*: Agree. OGIT needs to disseminate information, however acceptance will only occur if OGIT can demonstrate clear benefit to ACS in doing so.
- *DIMA response*: Agree. Approaches towards this goal will be influenced by DIMA's moves towards outsourcing.
- *DPIE response*: Agree. Practices are already in place, as acknowledged by ANAO.
- *NLA response*: Agree. This is supported on the assumption that services are not

outsourced. Consideration should be given to OGIT directly assisting business managers in those agencies not having a telecommunications manager.

- *Securities response:* Agree with qualification. With regard to part (b) of this recommendation, it is arguable that, in small agencies, this approach may not deliver any efficiencies. In the first instance, you need to establish that the business unit could benefit from such training and information. In Securities, this would vary markedly across business units. Secondly, any training or information provision needs to be relevant to the business unit and be 'just in time' information. An alternative, particularly for small agencies, is for the telecommunications unit to be a centre of excellence with a direct responsibility to provide proactive telecommunications consultancy services to those business units with the greatest potential to exploit the efficiencies that telecommunications can deliver.
- *OGIT response:* Agree with qualification (a). Agree (b). OGIT will continue to provide information about the potential of telecommunications to support business process re-

engineering such as the recently held seminar on the Tasmanian Integrated Community Network and program delivery using telecommunications in New Brunswick (Canada).

3.40

ANAO comment: Adoption of this recommendation would improve the efficiency of agencies' planning processes and business operations through the adoption of more efficient processes and technologies.

1.

4. Agency Management

This chapter examines agencies' supplier billing arrangements, cost management practices and performance measurement. The ANAO found that all the selected agencies reported billing anomalies for 1995-96; measures to limit the inappropriate use of telecommunications do not appear to be actively pursued in the selected agencies; and agencies need to better analyse the productivity impacts of their selected telecommunications services.

Background

4.1 As with any other business resource or input, agencies are accountable for the appropriate use of their telecommunications facilities and services⁴⁷. At one level, financial accountability in this context is a function of the extent to which agencies have established policies and procedures aimed at controlling the inappropriate or inefficient use of telecommunications. At another level, it is about providing assurance that the services paid for are in fact received. The former involves internal systems aimed primarily at the actions

and behaviour of agency staff. The latter is concerned with taking steps to minimise and redress the adverse financial impacts of any deficient practices.

4.2 An audit by the United States General Accounting Office of the United States Department of Agriculture's telephone use found substantial fraud by external parties using a variety of methods including fraudulent use of telephone company credit cards, 'hacking' into a voice mail system, and dialling collect charge to the organisation then (with internal collusion) redirecting to long distance calls. It reported to Congress that the abuse and theft of telecommunications services is one of the fastest growing crimes in the United States, with an estimated cost of \$9 billion annually to industry and

⁴⁷ A variety of practices are in evidence among the selected agencies in relation to the maintenance of asset registers, including a mixture of centralised and devolved systems. Cost thresholds established to identify portable and 'attractive' capital items vary (\$1000 in one agency and \$2000 in others).

government.⁴⁸ A 1993 United Kingdom National Audit Office report noted that one agency site achieved a reduction of 50 per cent in its telephone call charges immediately it notified its personnel that monitoring of telephony traffic was being instituted⁴⁹.

4.3 The analysis of trends in usage and expenditure using current and historical data on telecommunications forms a base for quality performance information to underpin procurement decisions and, in cases where 'end to end' managed services might be contracted, the performance management of those arrangements.

Billing arrangements

4.4 Agencies have expended considerable effort on the identification and reconciliation of billing anomalies with suppliers. All selected agencies reported to the ANAO that they have experienced billing anomalies in their telecommunications carriage service accounts. Billing anomalies typically related to divergent understanding between

supplier and client of service requirements and misapplication of tariffs and charges. These anomalies could lead to undercharging or overcharging for services, if reconciliation and recovery were not pursued.

4.5 On the basis of the data provided to the ANAO by the selected agencies, the total value of billing anomalies for the major supplier, Telstra, amounted to some five per cent of the total value of the selected agencies' expenditure with Telstra in 1995-96. Telstra has advised the ANAO that, in its view, there are no outstanding anomalies for 1995-96 in the selected agencies.

4.6 Among the commonly cited impediments to the efficient processing of telecommunications invoices are:

- the information contained in invoices requires significant reconciliation effort by the agency;
- high analytical and information management demands on agencies; and
- the number of invoices.

4.7 Agencies used a variety of approaches for account reconciliation in relation to telecommunications services. Some (mainly smaller) agencies relied on the manual checking of invoices while others used specialist proprietary software

⁴⁸ General Accounting Office, USDA Telecommunications More Effort Needed to Address Telephone Abuse and Fraud: Report to Congressional Requesters, April 1996.

⁴⁹ National Audit Office, Report by the Comptroller and Auditor-General, *Management of Telephone Services*, 1993.

products to identify invoice anomalies. In addition to the direct costs of billing anomalies there were significant opportunity costs, in terms of redirected productivity, associated with delays in obtaining credits from suppliers (frequently reported to take from one to three months and sometime taking over a year)

4.8 The ANAO was advised by OGIT that it is working toward achieving reductions in the number of accounts, and more user-friendly accounts from suppliers. There would be benefit to agencies if OGIT, in the context of its monitoring of the global whole-of-government framework, were to collate data on agencies' experiences with billing. With access to systematic, reliable data, OGIT would be in a stronger position to use the Commonwealth's buying power to encourage suppliers contractually to rectify billing anomalies. Accordingly, agencies should document the indicative costs of verification and reconciliation and the results of any negotiations with suppliers. This would provide OGIT with aggregated information to leverage from suppliers improved service for all Commonwealth agencies.

4.9 Finding: All of the selected agencies have experienced billing anomalies. Any billing anomalies connected to the supply of services involve

a cost to agencies in terms of the direct costs of staff time and contracted services, as well as costs associated with re-directed productivity. There would be value in a whole-of-government approach that documents any billing anomalies, which in themselves have cost implications for the agencies concerned.

Recommendation No.8

4.10 The ANAO *recommends* that:

- a) agencies institute systems for reviewing supplier accounts, recording any instances of apparent overcharging and undercharging and advising OGIT of indicative costs of any overcharging and undercharging, for use in its negotiations with suppliers; and
- b) OGIT identify, and incorporate in its whole-of-government arrangements with suppliers, contractual incentives to improve the accuracy of supplier billing for telecommunications services.

4.11 Agencies responded to the recommendation as follows:

- Agree: ABS; ACS; Austrade; DOCA; DHFS; DIMA (b); DPIE; NLA; Securities; Sports; and OGIT.
- Agree with qualification: DIMA (a).

4.12 Specific comments by agencies are set out below.

- *ABS response:* Agree. This is a necessary interim measure given the current standard of some vendors' billing systems. A longer term solution would be for OGIT and agencies to apply pressure to vendors to improve and/ or simplify their billing to a point where normal commercial risk management processes can be put in place.
- *Securities response:* Agree. Securities continuously reviews suppliers' accounts and in certain circumstances has changed suppliers where the suppliers failed to address the level and source of dissatisfaction with their service.
- *DHFS response:* Agree. OGIT should be pressing carriers for better practice billing across telecommunications services.
- *DPIE response:* Agree. Systems are in place to review supplier accounts and record overcharging. We undertake to advise OGIT of any overcharging.
- *DIMA response:* Agree with qualification (a). Agree (b). While the sentiment is agreed, the actions proposed at recommendation 8(b) are seen as more productive in eliminating the problem rather than increasing the burden on

agencies to monitor and report.

- *OGIT response:* Agree. Billing accuracy is a concern of Government. OGIT will examine whether the use of contractual incentives can be cost effectively implemented to improve telecommunications billing information. OGIT is working constructively with industry to address these issues.

4.13 ANAO comment: The ANAO agrees that billing accuracy is a concern. Adoption of this recommendation would assist in generating systematic, reliable information, to place the Commonwealth in a stronger position in its negotiations with suppliers. By using its buying power, OGIT could encourage suppliers to rectify costly and persistent errors; and so redirect an appropriate share of the risk away from the Commonwealth.

Cost management

4.14 The approaches used by agencies to monitor and manage telecommunications expenditure vary considerably. In decentralised agencies, some aspects of day-to-day management responsibility are devolved to program areas and

regional offices⁵⁰. The ANAO recognises that important benefits can be conferred by devolving authority to the business unit level. However, telecommunications is a strategic resource, and some level of corporate oversight of the deployment of that resource is necessary, both for business and accountability reasons.

4.15 In aggregate terms, telecommunications-related expenditure is a significant cost to the Commonwealth, although it represents only a small proportion of the operating costs of individual agencies. In 1995-96, the selected agencies incurred, in aggregate, average costs of around \$1500 per employee which represented some two per cent of operating costs that year (see Exhibit 1.3).

4.16 In addition to tracking expenditure, agencies should monitor traffic profiles⁵¹ in order to identify the components of their overall telecommunications costs and to identify options to minimise expenditure. For example, options might include moving to an alternative provider for some types of communication, or substituting more efficient services or

technology. This is generally given more attention in relation to data services than voice services.

Charge-back

4.17 Charge-back involves the reimbursement by business units of the direct costs of the calls made by the units. Charge-back, together with other cost recovery mechanisms, constitute a form of 'demand management' within agencies. It is a mechanism for 'user pays' within agencies which allows greater transparency and monitoring by business units of the costs of their telecommunications services. Charge-back can encourage discipline in relation to the appropriate use of telecommunications resources and can assist with establishing benchmarks (which can be applied both internally and externally) for telecommunications usage.

4.18 Seven of the ten selected agencies charge-back to their business units and cost centres to recover actual call costs⁵². Three of these agencies reported the recovery from business units of a share of the administrative overheads associated with telecommunications management. Two agencies

⁵⁰ None of the selected agencies had devolved the management of data services.

⁵¹ Involving analyses of call traffic by type of call (local, national long distance or international), call duration profiles, drop out rates, and line utilisation.

⁵² By contrast, external tenants on several of the selected agencies' networks were charged various proportions of the networks' overhead costs in addition to call charges.

which do not charge-back to their business units commented that the administrative effort required to operate a cost recovery regime would outweigh the potential benefits.

4.19 The use of cost recovery mechanisms is closely linked to the provision of call traffic and expenditure data to business units and cost centres. Periodic reporting on usage trends to line managers can support improved accountability for, and management of, telecommunications usage at the business unit level; improve understanding of telecommunications as a cost of doing business; and may increase interest in the value-adding potential of telecommunications on the part of line managers. The effective and efficient use of telecommunications by internal clients could be encouraged by the provision to business units of periodic reports covering expenditure trends; call composition; analyses of cost composition; exception reports (call and cost anomalies); and usage and cost projections. Half of the selected agencies provide regular reports to their business units and cost centres.

4.20 Charge-back of telecommunications costs could also motivate reduced personal use of official facilities and services. The potential costs to agencies of inappropriate

personal use of telecommunications services can stem from lost productivity (including for incoming personal calls) as well as from the direct costs of the telecommunications services themselves (particularly for national long distance or international services).

4.21 Finding: Efficient patterns of telecommunications use by business units can be encouraged through the provision of cost signals which raise managers' awareness of telecommunications as a resource which warrants prudent management. The majority of the selected agencies charge-back to their business units to recover actual call costs.

Agencies' procedures

4.22 Agencies require appropriate systems and controls which minimise the use of telecommunications for unofficial purposes and which promote the cost-efficient use of telecommunications for official purposes. Each percentage point of decrease in the Commonwealth's national long distance call costs (for example, STD or similar services), as a result of more effective management of usage, would translate on a whole-of-government basis to a saving of \$1.6 million per annum, based on OGIT's estimate of Commonwealth expenditure on

carriage services in 1995-96. In addition to the telecommunications cost savings, there would be savings in limiting unproductive use of work time.

4.23 The advent of fixed price 'end to end' managed services could remove the cost to agencies of inappropriate use of services. Effort by agencies to minimise inappropriate use could reduce the base usage on which price of externally managed services would be negotiated, in the event of a decision to outsource services.

4.24 Addressing problems associated with the personal over-use of telecommunications services is both a human resource management issue and a cost management issue. The telecommunications managers in the selected agencies possess the technical means to monitor call patterns and could identify possible personal over-use. In addition to reporting volumes and costs, electronic call traffic monitoring can assist management of the use of services by reporting on calls at specific times of day, of exceptional duration, to specific locations, and from particular extensions. How this information is used needs to be guided by agencies' human resource management policies and strategies.

4.25 The selected agencies use physical systems to minimise

fraudulent use of facilities or services by external parties and inappropriate use by their staff. For example, seven agencies reported some use of call barring. The Australian Bureau of Statistics posts monthly cost recovery data on a data base capable of being accessed by line managers.

4.26 Finding: The selected agencies generally have in place physical systems which limit inappropriate access to telecommunications services by external parties or staff.

4.27 Four of the selected agencies have policies, instructions or guidelines related to the use of telecommunications services for personal purposes⁵³. A further three reported that they have policies under development⁵⁴ and three reported they have no specific policies governing personal use of telecommunications facilities and

⁵³ Seven of the selected agencies report having procedures in place to deal with matters such as the allocation of mobile phones. Selected agencies advised that costs of inappropriate Internet use are difficult to identify and control. The Australian Bureau of Statistics uses logbooks and bans access to some sites, to reduce the costs to the agency of time spent on Internet activities peripheral to the Bureau's business.

⁵⁴ The Department of Immigration and Multicultural Affairs advised the ANAO that it is developing a policy statement on its telecommunications services, which will make explicit its expectation that staff would reimburse to the Department the cost of personal telephone calls if that cost exceeds a specified amount in a month.

services (additional to codes of conduct applicable to Commonwealth public servants generally).

4.28 While all of the selected agencies report a capability for personal call cost recovery, only three agencies could identify a total amount for personal call costs recovered. The Australian Bureau of Statistics with total staff numbers of around 3200 reported recovery of \$2600 for 1995-96, amounting to \$0.81 per staff member. The Department of Primary Industries and Energy with total staff numbers of around 3900 reported the recovery of \$2500 in 1995-96, amounting to \$0.64 per staff member. In the Department of Communications and the Arts \$500 was recovered in 1995-96, from its 539 staff, which represents \$0.88 reimbursement per staff member.

4.29 Although the use of monitoring technology at the personal level needs to take account of privacy and human resource management considerations, it does have the potential to contain the incidence and costs of personal over-use, if used in conjunction with:

- educating business unit managers about the potential for, and possible costs of abuse, unethical behaviour and fraud;
- liaising with human resource management staff in the

development of policies and approaches to reduce abuse;

- using call traffic reports to monitor use; and
- implementing cost-effective strategies to minimise opportunities for abuse (such as after-hours call-barring and requiring Personal Identity Numbers to activate telephones).

4.30 Some level of personal use of an agency's telecommunications services is unavoidable; and the use of rigorous compliance systems is not always feasible in terms of administrative costs or privacy considerations. However, the relatively low levels of reimbursement indicate scope for agencies to give consideration to more efficient management of the costs of personal use of facilities and services.

4.31 There is scope for the selected agencies to encourage efficient use of available telecommunications services as well as seeking greater productivity in terms of outcome from the use of telecommunications services. While the trend towards cheaper transmission and simpler tariffs mitigates the costs of time spent using telecommunications services, the costs of staff time need to be managed. In the selected agencies, monitoring of trends in individuals' usage is

generally regarded as a prerogative of supervisors in cases of under-performance (subject to privacy controls), rather than being regarded as a broad productivity issue applicable across all business units.

4.32 Finding: Reimbursement of the costs of personal use of telecommunications facilities and services is not actively pursued in the selected agencies. Each percentage point of decrease in the Commonwealth's national long distance call costs (for example, STD or similar services), as a result of more effective management of usage, would translate on a whole-of-government basis to a saving of \$1.6 million per annum, based on OGIT's estimate of Commonwealth expenditure on carriage services in 1995-96.

Recommendation No.9

4.33 The ANAO *recommends* that agencies:

- a) implement cost management strategies, including consideration of charge-back of telecommunications costs to business units and call trend monitoring, as appropriate to the size and nature of each agency; and
- b) develop codes of conduct regarding use of facilities and ensure that all staff are informed regularly about agency policies in

relation to the use of telecommunications.

4.34 Agencies responded to the recommendation as follows:

- *Agree:* ABS; ACS; Austrade; DIMA (b); DOCA; DHFS; DPIE; NLA; Securities; Sports; and OGIT.
- *Agree with qualification:* DIMA (a).

4.35 Specific comments by agencies are set out below.

- *ACS response:* Agree. Subject to outsourcing constraints and agency policy on charge-back. There must be a clear financial advantage in administering a charge-back system over the realisable savings.
- *Securities response:* Agree. Regarding charge-back of telecommunications, an important consideration is not only the size and nature of each agency but also the size and nature of business units within agencies.
- *DHFS response:* Agree. DHFS undertakes cost recovery of Telstra's services to business units and call trend monitoring for the department. However, a cautionary note that the process of producing the required figures can be costly, especially in networks that integrate voice and data over private lines. Care should be

taken that the cost of identifying such charges does not exceed the amount that is to be recovered from the client. Regarding (b), this has been in place in DHFS for some years.

- *DPIE response:* Agree. Practices are already in place, as acknowledged by ANAO.
- *OGIT response:* Agree. OGIT advises that recent trends in the telecommunications industry such as the development of distance-independent tariffs may reduce the significance of this issue.
- *DIMA response:* Agree with qualification (a). Agree (b). Internal cost recovery is viewed as an individual agency decision.

4.36 ANAO comment:

Adoption of this recommendation would assure proper use of agencies' telecommunications services and assets. It would serve the Commonwealth's interest by minimising the potential financial and productivity costs of personal overuse of official assets and services.

Performance measurement

4.37 The selected agencies' performance monitoring for

telecommunications is outlined in Exhibit 4.1.

4.38 It is important that agencies monitor the performance of their telecommunications use and the technical performance of services and systems. For operational effectiveness, performance indicators should be supported by strategies to improve performance against targets. Assurance is needed that the monitoring system is providing the appropriate information and using the most appropriate performance indicator. For example, fast answering of calls would be meaningless if the clients were frustrated by subsequent handling of their inquiries⁵⁵.

4.39 Some of the agencies review their data transmission regularly as the basis of capacity planning. All of the selected agencies collect technical performance information and all agencies report that they use telecommunications traffic and expenditure data to provide

⁵⁵ The Performance Information Principles articulated jointly by ANAO and the Department of Finance in a Better Practice Guide (November 1996) include that performance information should relate to the objective of the program and enable assessment of the extent to which the objective is being achieved. It should also be differentiated appropriately at different levels of an organisation or program. Performance information should measure something significant and should be related to client expectations or requirements.

ongoing assessments of cost-efficiency. However, they do not systematically evaluate the value added by telecommunications

services to their agency's core business.

Exhibit 4.1

Performance monitoring for telecommunications in selected agencies

ISSUE	COMMENT
Key performance indicators (KPIs)	<p>Only two agencies reported having key performance indicators in relation to voice management.</p> <p>Seven agencies reported collecting performance information of various types, some of which is collected only irregularly.</p> <p>All agencies generate some descriptive information in relation to call patterns and expenditure.</p>
Performance information	<p>All agencies monitor technical performance as a part of their day to day management. The main focus is on minimising down-times, rectifying faults and adjusting service dimensioning to ensure required levels of traffic flow (and to minimise excess capacity).</p> <p>All agencies are concerned with the control of expenditure. Economic performance is measured principally in terms of maintaining, or reducing financial outlays for target volumes of service.</p> <p>No selected agency measures performance in terms of value-adding to business. One agency referred to the role of telecommunications as an input into business process re-engineering. Five agencies reported providing call traffic and expenditure information to business units (although seven agencies report the use of 'charge-back' to recover actual call costs).</p>
Value-adding to operations	<p>Two agencies provide regular reports to business units with some analysis of trends. Other agencies provide summary data for verification. No agency undertakes analyses of internal or external client satisfaction with agency telecommunications services on a regular or systematic basis. Internal client satisfaction is addressed through ad hoc surveys,</p>

analyses of fault reports at a help desk, or feedback in the context of service level agreements.

Source: ANAO based on information provided by the selected agencies.

4.40 Finding: The selected agencies do not systematically capture information to support evaluation of the productivity benefits, including savings, accruing from use of selected services.

4.41 Those of the selected agencies using telecommunications to provide a single telephone entry point for external clients (such as call centres using a national low-cost call number) undertake a variety of measures of incoming call traffic. For example, the Australian Securities Commission and the Department of Primary Industries and Energy each have performance targets for the answering of calls directed to national information lines. The Department of Primary Industries and Energy's Rural Access Program also measures the cost of information delivery to clients using telecommunications facilities and staff, and the Department of Immigration and Multicultural Affairs uses electronic measurement of service delays as one of the performance indicators across several of its programs.

4.42 All agencies report that they undertake some comparison

of trends in data and call traffic and expenditure in order to plan network capacity and to identify anomalies, assess trends and/or set budgetary targets. Some benchmarking of data services has been undertaken in the context of system replacement or upgrade, with ongoing trend analysis ensuing. All agencies have the technical capacity to compare (to varying degrees) their telecommunications usage and costs of internal business units.

4.43 While internal benchmarking can be used to measure relative efficiencies within an agency, it remains possible that, by comparison with another organisation with similar characteristics, that agency may be performing below standards being achieved in the broader context. The Australian Customs Service has participated in a formal benchmarking exercise involving the private sector.

4.44

The ANAO considers that, wherever possible, performance measurement and benchmarking should be supported by quantitative approaches which are capable of standardising results for agencies with differing characteristics and identifying the relative position of each agency⁵⁶. The Department of Communications and the Arts has advised the ANAO that, for small agencies, the cost of independent benchmarking can be high in comparison with the agency's telecommunications expenditure. It has suggested to the ANAO that:

A cost effective option for smaller agencies might be for OGIT to report a range of key indicators regularly to agencies, relating to best practice telecommunications management in both private and public sectors, against which smaller agencies could compare their performance. OGIT could also publish information on methodology to ensure that the comparisons undertaken internally are accurate.

4.45 Agencies' efforts to benchmark their telecommunications should

⁵⁶ Bureau of Industry Economics *International Performance Indicators: Telecommunications, Research Report No 48*, AGPS, 1992 reported the use of an econometric modelling technique, Data Envelopment Analysis (DEA). DEA uses a linear programming technique to measure the technical efficiency of specified economic activities. Other options include use of proprietary software products to assist understanding of the business drivers underlying observed patterns of telecommunications usage and expenditure.

reflect not only the importance of telecommunications within their operational budget but also the expected return to the agency, in terms of its business outcomes, of their investment in telecommunications approaches to business delivery. It would be valuable to the managers of small agencies if OGIT were to identify core indicators which would enable monitoring of the contribution of various telecommunications services to the achievement of business objectives. This would enable more effective performance management by agencies.

4.46 Finding: All of the selected agencies undertake some performance measurement and monitoring but they focus on inputs rather than business outcomes. Measurement by agencies of the impact of their selected telecommunications services on program performance would enable better understanding of the contribution of telecommunications services to their business and support informed decisions in agencies' selection from the range of available services. There could be significant benefits if OGIT facilitated the adoption by agencies of a quantitative approach to benchmarking telecommunications use and its contribution to the achievement of business objectives, including through identifying and

disseminating core benchmarking parameters.

Recommendation No.10

4.47 The ANAO *recommends* that:

- a) agencies develop frameworks for monitoring the outcomes of their use of various telecommunications services including, where appropriate, productivity impacts of the use of the selected telecommunications services and savings achieved through their use;
- b) agencies develop and implement internal and external benchmarking strategies for telecommunications use and management; and
- c) OGIT facilitate, through the provision of advice, the adoption by agencies of a quantitative approach to benchmarking telecommunications use, including through identifying/establishing and disseminating core benchmarking parameters.

Agencies responded to the recommendation as follows:

- *Agree*: ABS; ACS; Austrade (c); DHFS; DIMA; DPIE; NLA; Securities; and Sports.
- *Agree with qualification*: Austrade ; DOCA; and OGIT (c).

4.48 Specific comments by agencies are set out below.

- *Securities response*: Agree. Securities would agree to participate in any implementation of internal and external benchmarking provided suitable facilitation was provided by OGIT.
- *ABS response*: Agree. The activities recommended in part (b) of the recommendation should come after and build on the outcomes of part (c).
- *DHFS response*: Agree. Some networking environments are dynamic by nature and it may be very difficult to accurately quantify the benefits. Agencies are constantly modifying their networks in response to changing business needs, new tariffs and to take advantage of new technology. Perhaps recommendation (c) could be addressed through the forums proposed under recommendation 4.
- *DIMA response*: Agree. Initial emphasis would well be placed on recommendation 10(c), with OGIT facilitation

providing the basis for agency achievements proposed in recommendations 10(a) and 10(b).

- *DPIE response:* Agree. Practices are already in place, as acknowledged by ANAO. Recommendation (b) will be implemented following the release of OGIT's core benchmarking parameters.
- *Austrade response:* Agree with qualification. This is agreed in principle but for Austrade actual implementation will be difficult as the business traffic is integrated globally across both the domestic and international networks. For overseas posts different benchmarks would be required for services outside the portfolio network.
- *DOCA response:* Agree with qualification. DOCA notes that its telecommunications carrier costs as a percentage of operating costs shown in Exhibit 1.3 of the report reflect near to best practice within the selected agencies. DOCA is concerned that the imposition of mandatory audit, benchmarking and planning procedures may be less cost-effective to implement in a smaller agency than a large one. DOCA believes it can obtain a substantially better return on investment by concentrating on issues that carry a high business risk

such as the Year 2000 issue and preparing for market testing of information technology infrastructure services than by successive audits and benchmarking of a comparatively well understood and well documented issue such as telecommunications costs.

- *OGIT response :* Agree with qualification (c). This is an expansion of OGIT's role that was not envisaged. OGIT is researching the development of benchmarking parameters for measuring telecommunications savings and the cost of processing telecommunications bills. Beyond this, the monitoring of telecomm-unications' contribution to business objectives is the responsibility of the agency and must be subject to tests of cost effectiveness.

4.49 ANAO comment: The systematic collection and reporting of performance information would enable a more robust analysis of value for money. Benchmarking with internal and external peers would highlight and encourage sound administrative practices, thereby contributing to improved productivity and client service.

Auditing telecommunications services and infrastructure

4.50 Comprehensive reviews of telecommunications services (termed 'audits' of services) aim to identify duplication and redundancy; reveal systemic issues affecting control and compliance; and enable the reconciliation of carrier accounts. Undertaken by industry specialists, they can identify significant savings as well as provide baseline information for use in planning and monitoring activities.

4.51 Seven of the selected agencies reported that they have carried out audits of telecommunications services between 1993 and 1997. Three agencies reported activities which fell short of comprehensive audits of services and infrastructure.

4.52 The Australian Bureau of Statistics reported savings of \$300 000 per annum resulting from its 1993 national audit of fixed service and infrastructure. Auditing and bill reconciliation undertaken in 1995-96 and 1996-97 resulted in the Australian Customs Service obtaining \$800 000 in credits.

4.53

Finding: Comprehensive reviews of telecommunications services (termed 'audits' of services) have been a cost-effective means of identifying potential efficiencies for most of the selected agencies, for example through removing redundant services or rectifying billing errors. The ANAO considers that they should be undertaken periodically in all of the selected agencies.

Recommendation No.11

4.54 The ANAO *recommends* that agencies conduct periodic audits of their telecommunications technical services and infrastructure and document the efficiencies implemented through that activity.

4.55 Agencies responded to the recommendation as follows:

- *Agree:* ABS; ACS; Austrade; DHFS; DIMA; DPIE; NLA; Securities; Sports; and OGIT;.
- *Agree with qualification:* DOCA.

4.56 Specific comments by agencies are set out below.

- *ACS response:* Agree. It is within the larger agencies where implementation of this recommendation will derive maximum financial benefit to the Commonwealth.

- *DPIE response:* Agree. Practices are already in place, as acknowledged by ANAO.
- *DOCA response:* Agree with qualification. Same comment as for recommendation 10.

4.57

ANAO comment: Adoption of the recommendation could be expected to identify savings, optimise the efficiency of agencies' services and infrastructure, and identify baseline information to support planning and benchmarking activities.

Canberra ACT
23 October 1997

P. J. Barrett
Auditor-General