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TRANSPORT AND COMMUNICATIONS

This chapter contains information on transport and communications and the government bodies concerned with these activities. More detailed figures and particulars for earlier years are included in the publications listed in the bibliography at the end of the chapter.

TRANSPORT ORGANISATIONS

The Australian Transport Advisory Council—ATAC

In April 1946, the Commonwealth Government and the State Governments agreed to establish a coordinating and advisory council at ministerial level with the principal function of reviewing annually the various laws and regulations deemed necessary to safeguard the interests of the State Governments and road users generally, and to consider matters of transport policy. The Australian Transport Advisory Council comprises Commonwealth, State and Territory ministers responsible for transport, roads and marine matters. The New Zealand Minister of Transport, Civil Aviation and Meteorological Services is also represented on the Council as an observer.

At present, the Council meets annually and its primary role is to review and coordinate various aspects of transport policy, development and administration. The Council functions through initiating discussion and reports on any matter raised by Council members, and by providing advice on matters which will promote better coordination and development of transport to the benefit of Australia. The Council has one policy advisory group reporting directly to it, the Standing Committee on Transport (SCOT). The Committee comprises a representative of each ATAC minister, usually the heads of the relevant departments, and deals with overall issues of policy coordination and development. The Committee is supported by four groups of specialist advisers covering the interests of road, rail, road safety and marine and ports.

In addition, the following technical committees and subsidiary bodies report to the Marine and Ports Group and the Road Safety Group:

- Ship Standards Advisory Committee;
- Marine Pollution Advisory Committee;
- Road User Safety Advisory Committee;
- Licensing and Traffic Codes Committee;
- Advisory Committee on Transport of Dangerous Goods;
- Vehicle Standards Advisory Committee;
- Advisory Committee on Vehicle Emissions and Noise; and
- Australian Motor Vehicle Certification Board.

Australian Road Transport Advisory Committee—ARTAC

This Committee was established in April 1990 as part of the continuing push to reform the land transport sector. It replaced an earlier body, the Australian Road Freight Transport Advisory Committee which was established in 1985.

Its function is to provide the Minister for Land Transport with direct industry based advice on all aspects of the road transport industry. The specialist advice from the Committee will also assist in the task of more fully integrating road and rail with other forms of transport.

Bureau Of Transport And Communications Economics—BTCE

The Bureau is a centre for applied economic research in the Department of Transport and Communications. It undertakes studies and investigations that contribute to an improved understanding of the factors influencing the efficiency and growth of the transport and communications sector and the development of effective transport and communication policies.

The Bureau regularly publishes the results of its research work and its publications are available through the Commonwealth Government Bookshops in capital cities.

Civil Aviation Authority—CAA

The CAA is a Government Business Enterprise (GBE) established under the *Civil Aviation Act 1988*. It commenced operations on 1 July 1988.

The Authority is responsible for the safety regulation of civil aviation in Australia. It also provides air route and airway facilities and associated services to the aviation industry, including air traffic control, flight service, rescue and fire fighting, search and rescue and aeronautical information.

Over 80 per cent of CAA's income comes directly from aircraft operations in the form of service and facility charges.

The Authority represents Australia on the Council of the International Civil Aviation Organisation (ICAO) based in Montreal. The CAA is able to offer consultancy and management services both within and outside Australia.

Federal Airports Corporation—FAC

The Federal Airports Corporation is a GBE established by, and incorporated under, the *Federal Airports Corporation Act 1986*.

On 1 January 1988, the FAC assumed ownership, management and development of Australia's major airports and for the commercial activities in the airports, including arrangements with airlines and other operators for the use of airports and for leasing of property and the letting of business concessions.

The Federal Airports Corporation has responsibility for the following airports:

- NSW—Sydney (Kingsford Smith) Airport, Bankstown, Hoxton Park and Camden;
- Vic.—Melbourne, Essendon and Moorabbin;
- Qld—Brisbane, Archerfield, Townsville, Mount Isa and Coolangatta;
- SA—Adelaide and Parafield;
- WA—Perth and Jandakot;
- Tas.—Hobart, Launceston and Cambridge;
- NT—Darwin, Alice Springs and Tennant Creek; and
- ACT—Canberra.

The Corporation is a statutory transport business undertaking of the Commonwealth and is required to act in accordance with sound commercial practice. It is commercially flexible and responsive in order to make changes and act in a timely manner to meet the requirements of a dynamic market.

Like any business, the Corporation is required to be financially self-supporting. It has been established with a capital base and debt/equity ratio determined by the Commonwealth Government in accordance with the FAC legislation.

THE TRANSPORT INDUSTRY

Transport Industry Survey

This section contains statistics obtained from a survey of transport establishments conducted in respect of 1983–84 (referred to as the Transport Industry Survey). This survey was the first of its kind conducted in Australia and included establishments predominantly engaged in providing passenger or freight transport services for hire or reward by road, rail, water and air transport (collectively referred to as the modal transport industries) plus freight forwarding.

The survey was conducted as a component of the Australian Bureau of Statistics integrated economic statistics system and the results are comparable with economic censuses and surveys undertaken annually for the mining, manufacturing and gas industries and periodically for the wholesale, retail and selected service industries.

Summary of operations

The following table shows key items of data by industry mode for transport establishments in Australia, for the year 1983–84. The industries described are based on the 1983 edition of the Australian Standard Industrial Classification (ASIC).

TRANSPORT ESTABLISHMENTS: SUMMARY OF OPERATIONS BY INDUSTRY MODE, AUSTRALIA, 1983–84

ASIC Code	*Description*	*Establishments at 30 June 1984*	*Average employment over whole year(a)*	*Wages and salaries (b)*	*Turnover*	*Stocks*		*Total purchases, transfers in and selected expenses*	*Value added*	*Fixed capital expenditure less disposals*
						Opening	*Closing*			
		No.	No.	$m	$m	$m	$m	$m	$m	$m
511	Road freight transport	32,943	99,606	902.5	5,187.3	47.4	49.8	2,921.8	2,267.8	237.6
512	Road passenger transport	10,615	45,841	571.2	1,528.6	34.0	37.4	593.5	938.5	56.4
5200	Rail transport	12	86,721	1,688.5	3,314.8	178.9	179.4	1,417.5	1,897.8	406.9
53	Water transport	165	8,978	212.7	1,238.9	14.9	14.7	814.5	424.3	23.2
54	Air transport	334	23,597	600.8	2,958.0	20.4	19.9	1,747.9	1,209.6	178.1
51–54	**Total modal transport**	**44,069**	**264,743**	**3,975.7**	**14,227.6**	**295.6**	**301.2**	**7,495.2**	**6,738.0**	**902.2**

(a) Includes working proprietors and partners. *(b)* Excludes the drawings of working proprietors and partners.

Business Vehicle Survey

Concurrent with the Transport Industry Survey (TIS), the Bureau conducted a Business Vehicle Survey (BVS) to obtain a more complete picture of road freight transport activity in Australia. This involved the collection of road freight transport information from a sample of private enterprises whose main activity was not road freight transport but who operated at least one truck with a gross vehicle mass of 2.7 tonnes or more and used that truck to carry freight on public roads.

Results from the TIS and BVS were combined to produce estimates of road freight activity as shown in the following table.

ROAD FREIGHT ACTIVITY OF PRIVATE ENTERPRISES: SUMMARY OF ACTIVITY BY INDUSTRY DIVISION, AUSTRALIA, 1983–84

ASIC Code	Description	Enterprises at 30 June 1984	Trucks operated at 30 June 1984			Truck drivers at 30 June 1984			Wages and salaries paid to truck drivers(a)	Freight carried on trucks (b)
			Rigid	Articulated	Total	Working proprietors/ partners	Employees	Total		
A	Agriculture, forestry, fishing and hunting	85,796	105,446	8,163	113,609	11,727	3,416	15,143	35.3	58.5
B	Mining	557	2,151	424	2,575	62	1,810	1,872	37.6	17.3
C	Manufacturing	8,109	21,545	2,867	24,413	694	16,049	16,743	279.0	43.8
E	Construction	12,383	18,327	1,494	19,822	2,066	4,860	6,926	79.8	40.1
F	Wholesale and retail trade	19,333	34,222	3,544	37,766	4,070	16,885	20,955	297.9	55.8
511	Road freight transport	32,616	36,535	21,307	57,842	28,147	27,818	55,966	501.5	362.1
512–580	Other transport and storage	742	1,237	251	1,488	157	684	841	13.0	5.2
G	Total transport and storage	33,358	37,772	21,558	59,330	28,305	28,502	56,807	514.5	367.3
I	Finance, property and business services	1,718	3,725	922	4,647	97	2,612	2,710	51.0	11.4
K	Community services	1,055	2,277	42	2,319	500	1,187	1,688	20.4	6.5
L	Recreation, personal and other services	1,773	2,523	159	2,682	247	677	924	10.0	6.2
	Total	**164,081**	**227,988**	**39,174**	**267,161**	**47,769**	**75,999**	**123,768**	**1,325.5**	**606.9**

(a) Excludes the drawings of working proprietors and partners. *(b)* Estimates of freight carried relate to freight uplifted by trucks and therefore, to the extent that transshipment occurs (i.e. the transfer of freight from one truck to another), estimates of freight carried will overstate the actual physical quantity of freight moved.
NOTE: Road freight activity data collected from road freight establishments included in the TIS has been tabulated against the industry to which the enterprise of the road freight transport establishment is classified, e.g. the figures for a road freight establishment of a manufacturing enterprise would be tabulated against ASIC Division C.

SHIPPING

Control of Shipping

Commonwealth Government navigation and shipping legislation

Commonwealth Acts concerned with shipping are: the *Navigation Act 1912*, the *Sea Carriage of Goods Act 1924*, the *Seamen's Compensation Act 1911*, the *Seamen's War Pensions and Allowances Act 1940*, the *Protection of the Sea (Civil Liability) Act 1981*, the *Protection of the Sea (Powers of Intervention) Act 1981*, the *Protection of the Sea (Shipping Levy) Act 1981*, the *Protection of the Sea (Shipping Levy Collection) Act 1981*, the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983*, the *Navigation (Protection of the Sea) Amendment Act 1983*, the *Australian Coastal Shipping Commission Act 1956*, the *Environment Protection (Sea Dumping) Act 1981*, the *Submarine Cables and Pipelines Protection Act 1963*, the *Lighthouses Act 1911*, the *Marine Levy Act 1989*, the *Marine Levy Collection Act 1989*, the *Explosives Act 1961*, the *King Island Shipping Service Agreement Act 1974*, the *Bass Strait Sea Passenger Service Agreement Act 1984*, the *Ship Construction Bounty Act 1975*, the *Bounty (Ships) Act 1980*, the *Bounty (Ship Repair) Act 1986*, the *Australian Shipping Commission (Additional Capital) Act 1985*, the *Ships (Capital Grants) Act 1987*, the *Trade Practices Act 1974* Part X (as amended by the *Trade Practices (International Liner Cargo Shipping) Amendment Act 1989)*, the *Shipping Registration Act 1981*.

Navigation Act

The *Navigation Act 1912* (as amended), provides for various regulatory controls over ships and their crews, passengers and cargoes, mainly for the preservation of life and property at sea. Substantial penalties are provided for serious offences. The Act gives effect to a number of important international conventions produced under the aegis of the International Maritime Organisation (IMO).

Regulations and orders under the Act give legislative effect to various safety and technical requirements in respect of ships, their cargoes and persons on board.

Taken in the order in which they appear in the Act, the main substantive matters dealt with are as outlined below.

Masters and seamen

Some sections deal with the examination of masters, mates and engineers for certificates of competency. Other sections ensure that appropriate conditions apply to crews serving on ships by providing for the engagement, discharge and payment of wages; discipline at sea; the settlement of wages and other disputes; the return to their home port of distressed seamen; taking charge of wages and effects of deceased seamen and of those who have been left behind; and inquiries into deaths at sea. The health of seamen is cared for by the prescription of scales of medicines and medical stores to be carried by ships, and there are provisions to give effect to International Labour Organisation Convention requirements for the accommodation of crews. Plans for new or altered accommodation in ships have to be approved.

The Act provides for a Marine Council to advise the Minister on the suitability of persons for engagement as seamen.

Ships and shipping

There are particularly important provisions dealing with ship safety in such matters as survey of ships, load lines, life-saving and fire appliances, prevention of collisions, and carriage of potentially dangerous cargoes. While in Australia, all ships which trade interstate or overseas come under the survey provisions of the Navigation Act and require certificates issued or recognised by the Department of Transport and Communications, unless they are registered in a country which is a party to the Convention concerned and hold valid certificates issued by their governments and conforming to the requirements of the Safety of Life at Sea and Load Lines Conventions. There is power to detain any ship, the condition of which does not conform with the conditions set out in its certificate, or which appears to be overloaded or otherwise unseaworthy or substandard.

Passengers

These provisions deal with matters necessary or convenient for regulating the carriage of passengers in respect of such matters as numbers that may be carried, accommodation and health aspects.

Offshore industry

These provisions deal with offshore industry vessels and offshore industry mobile units. Marine orders give effect to IMO resolutions on this sector of the marine industry.

Coasting trade

Under the coasting trade provisions of the Navigation Act, the Australian coastal trade is reserved for licensed vessels, i.e. those which employ seamen at Australian wage rates and are not subsidised by foreign governments. The Act does not restrict the class of ships which may obtain a licence. It is open to any vessel, irrespective of the registry, to obtain a licence on compliance with these conditions and to operate in the Australian coastal trade. Provision exists for unlicensed vessels to carry interstate cargoes under single or continuous voyage permits in certain circumstances where licensed vessels are not available or are inadequate to meet the needs of the trade.

Wrecks and salvage
There are provisions in relation to wrecks and salvage, covering preservation of life and of the wreck and its cargo and related matters.

Limitation and exclusion of shipowners' liability
These sections give effect to an international convention and make provision on the widest possible basis for the limitation of shipowners' liability in Australia.

Courts of Marine Inquiry
Under the *Transport and Communications Legislation Amendment Act (No. 2) 1989*, the provisions relating to Courts of Marine Inquiry and the investigation of marine accidents were repealed. The repeal came into effect on 3 September 1990. From that date marine accidents investigations and inquiries will be conducted under the provisions of the Navigation (Marine Casualty) Regulations.

Shipping Registration Act

The *Shipping Registration Act 1981* received Royal Assent on 25 March 1981 and was proclaimed on 26 January 1982. This Act replaces Part I of the *Merchant Shipping Act 1894* (UK) under which ships in Australia were registered as British ships. The Act provides for all ships on the British Register in Australia to be automatically transferred to the new Australian Register. The Act has two basic objectives, namely the conferring of Australian nationality on Australian-owned ships and the registration of ownership and encumbrances.

The Act was amended in 1985 to improve the general administration and the protection of registered and unregistered interests.

Taken in order in which they appear in the Act, the main substantive matters are as follows.

Registration of ships
This part deals with the obligation to register Australian-owned ships, the ships permitted to be registered, the application for registration, particulars to be entered in the Register, the issue of Registration Certificates, Provisional Registration Certificates and Temporary Passes, changes in ownership, marking and naming of the ship, nationality of ships, flags to be flown, assuming and concealing Australian nationality.

Transfers, transmissions and mortgages
This part deals with the transfer, transmission of ship and shares, the taking out, transfer, transmission and discharge of mortgages and the entry of this information into the Register. Caveats can be lodged to protect unregistered interests.

Administration
This part deals with the appointment of the Registrar, delegation of the powers of the Minister and Registrar, the establishment of the Shipping Registration Office and Branch Offices.

Register of ships
This part deals with the maintenance, rectification and inspection of the Register.

Miscellaneous
This part deals with liabilities of ships not registered, the appointment of registered agents, alterations to a registered ship, forfeiture and detention of ships, taking officers to sea, false statements, offences, evidentiary provisions, review, jurisdiction and appeals, preservation of State and Territory legislation and regulation making powers.

Transitional provisions
This part deals with the change over from the previous law to the new legislation. This includes the completion of transactions commenced under the previous law and the acceptability of documents prepared under the previous law. This part is now largely non-operative.

Ships (Capital Grants) Act

The *Ships (Capital Grants) Act 1987* provides shipowners with a taxable grant of seven per cent of the purchase price of eligible new trading ships. The legislation defines the conditions and procedures under which a grant may be paid. Briefly, the Act requires that ships hold a category certificate and be crewed in accordance with crewing benchmarks specified for that category, be registered in Australia and crewed with Australian residents. As part of its Shipping Reform Strategy, the Government has extended the grant provisions to new vessels introduced before 30 June 1997—a five year extension of the Act. Existing Australian vessels which undergo structural or equipment changes and allow a reduced crew level are eligible for grants. In this case a grant is payable at a rate of seven per cent of the cost of the modifications.

Lighthouse Act

The Lighthouse Act provides legislation for the provision and operation of marine navigational aids. It describes powers and details offences.

Marine Navigation Levy Act

The Marine Navigation Levy Act came into force on 1 July 1990. It imposes a levy on certain sea-going ships and specifies the amount to be levied.

Marine Navigation Collection Act

The Marine Navigation Collection Act came into force on 1 July 1990. It provides for the collection of the Marine Navigation Levy. It indicates liability for the levy, when and to whom the levy is payable, and recovery or remission of the levy where appropriate.

ANL Limited

ANL Limited is an incorporated public company, all the shares of which are owned by the Commonwealth. It is Australia's national shipping line.

ANL Limited was created on 1 July 1989 under the *ANL (Conversion into Public Company) Act 1988*. The Company is the successor to the Australian Shipping Commission (trading as the Australian National Line) which was created in 1956 as the Australian Coastal Shipping Commission.

Incorporation has enhanced the Line's freedom to manage itself on a day-to-day basis and its ability to compete on equal terms with private shipping operators. Accountability is maintained through strategic oversight, by monitoring corporate plans and financial targets.

As at 30 June 1990, ANL operated a fleet of 14 ships comprising ten ships in overseas trades and four in coastal trades and having a combined deadweight tonnage of 651,000 tonnes. The overseas fleet includes seven liner ships totalling 171,000 deadweight tonnes, a specialised car carrier of 9,000 deadweight tonnes and two bulk carriers totalling 279,000 deadweight tonnes. On the coast, ANL operates three bulk carriers totalling 185,000 deadweight tonnes and a roll-on roll-off ship of 7,500 deadweight tonnes.

In November 1988, ANL merged its container terminal and stevedoring operations with those of James Patrick and Company Pty Ltd to operate as National Terminals (Australia) Limited (NTAL). ANL is the majority shareholder with 60 per cent of the shares and Patricks holds the other 40 per cent. NTAL is one of Australia's two largest container terminal operators with terminals at Sydney, Melbourne, Freemantle and Tasmanian Ports.

From 1983 to 1988, affected by the general downturn experienced by the shipping industry, ANL implemented a program of rationalisation and withdrew from unprofitable services. This saw fleet numbers fall from 33 in 1983 to 12 in early 1989. With the current upturn in the shipping industry, ANL is now in the process of replacing its ageing fleet with modern, fuel-efficient, low-crewed vessels. Two additional ships joined the fleet in May and June 1989. ANL has also placed orders for two cellular container vessels to be built in Korea for use in its Asian liner trades and two roll-on roll-off vessels, one to be built in Singapore and one in Newcastle, for the coastal trade.

The Line has also been moving into shipping-related activities, particularly container management, freight forwarding, ship agency, customs agency and ship management services in an effort to broaden its revenue base and provide a more integrated transport service.

Shipbuilding

In the early 1980s the Australian shipbuilding industry was highly protected with bounty rates of up to 27.5 per cent payable on costs of construction. The industry sought principally to maintain its domestic market against highly competitive overseas builders by producing a broad range of vessels which met most of Australia's needs.

In 1984, a major restructuring program was introduced by the Commonwealth Government. Not one Australian built ship of bountiable size was exported in that year.

The restructuring program placed emphasis on the development of a more efficient and export oriented industry assisted by a registration process and monitoring of the industry developments by the Shipbuilding Consultative Group.

At the present time, the newly developing Australian shipbuilding industry has grown to the extent that vessels intended for export markets under construction and on order, account for more than half the vessels produced. The value of these orders exceeded $600 million at 30 June 1989.

There have been some notable marketing successes in international markets which are due to shipbuilders implementing improved and innovative management, innovative designs, high quality production techniques, new materials and effective marketing against strong international competition.

The use of reinforced plastic fibre in ship interiors and the application of aluminium in the production of hulls has often made Australian vessels technically superior.

The industry has successfully entered a number of niche markets for luxury motor yachts, specialised fishing vessels and high-speed catamarans.

Assistance to the industry was reviewed by the then Industries Assistance Commission in their report of 29 June 1988. On the basis of this review and the success of the restructuring plan, the Government decided to continue bounty assistance for a further six years, but with revised registration criteria for shipbuilders and with a phasing down in bounty rates until June 1995, when bounty assistance will cease.

The *Bounty (Ships) Act 1989* provides for assistance to shipbuilders from 1 July 1989 to 30 June 1995. Bounties paid to shipbuilders will be reduced from the current level of 15 per cent to 10 per cent on 1 July 1991, to five per cent on 1 July 1993 and to nil on 1 July 1995.

As at 30 June 1990, there were 15 shipbuilders registered for bounty purposes under the new arrangements. The overall level of activity in the commercial sector remained strong in 1989–90 with continued strong export performance. There was further restructuring in the industry during 1989–90.

Total financial assistance to the commercial shipbuilding industry in 1989–90 amounted to $45 million (compared to $45 million in 1988–89 and $37.2 million in 1987–88).

Stevedoring industry

In December 1977, legislation was introduced which provided for new administrative, financial and industrial arrangements for the stevedoring industry, and abolished the Australian Stevedoring Industry Authority. The arrangements give the parties directly involved in the industry greater responsibility for the industry's affairs.

The Stevedoring Industry Finance Committee is responsible for the disbursement of funds collected through statutory man-hour and cargo levies.

A federal coordinating committee, comprising representatives of the employers and the Waterside Workers' Federation (WWF), Broken Hill Pty Ltd (BHP) and the Australian National Line, oversees the operation of arrangements agreed to in the General Agreement between employers and the WWF. At the port level such matters are handled by Port Coordinating Committees set up in the major ports.

Under section 168 of the *Industrial Relations Act 1988*, a Port Conciliator Service was established to assist parties to an industrial award to implement the procedures of that award for the prevention or settling of disputes.

The Statutory provisions relating to the industry are contained in the *Stevedoring Industry Finance Committee Act 1977*, the *Stevedoring Industry Levy Act 1977*, the *Stevedoring Industry Levy Collection Act 1977*, the *Port Statistics Act 1977* and part VI, division 9, of the *Industrial Relations Act 1988*.

As part of a general reform program, the Government has agreed to provide financial assistance toward the cost of a redundancy scheme as a means of rejuvenating the waterfront workforce. Legislation will be amended to allow industry levies to be devoted to this purpose.

The Stevedoring Industry Finance Committee will be responsible for the disbursement of funds collected through statutory levies for the redundancy scheme.

Waterfront reform

In June 1989 the Government outlined a comprehensive plan for reform of Australia's waterfront.

The Government broadly accepted the findings of the Inter-State Commission (ISC) Waterfront Report which was released in 1989 following more than two years of intensive investigations into the means of improving the waterfront's efficiency, productivity, reliability and industrial relations record.

Reforms are being made in three major areas:

(a) The reform of the stevedoring and container depot industries is proceeding in accordance with the provisions of an In-Principle Agreement negotiated between the Commonwealth Government, the ACTU, stevedoring unions and employers. Major changes flowing from the Agreement are being implemented over a three year period and include:

- — introduction of enterprise employment at major ports;
- — a one-off special retirement/redundancy package for 3,000 employees and a recruitment program for 1,000 new entrants over the period of the reform process to rejuvenate the workforce;
- — Government funding of up to $154 million towards redundancy payments, training, skills audits and job redesign projects. The matching employer contribution towards redundancy costs is being met through statutory man-hour and cargo levies;
- — award restructuring for the development of skills related career paths and a greater emphasis on training;
- — introduction of arrangements for a supplementary workforce to meet fluctuating labour demands on a daily hire basis; and
- — phasing out of cross-subsidisation of stevedoring labour costs in small ports under present statutory levy arrangements.

The Waterfront Industry Reform Authority (WIRA) has responsibility for oversighting the implementation of the In-Principle Agreement, monitoring and reporting to Government every six months on progress in the introduction of the new arrangements and the disbursal of restructuring assistance. The current statutory provisions relating to the

stevedoring industry are contained in the *Stevedoring Industry Levy Act 1977*, the *Stevedoring Industry Levy Collection Act 1977*, the *Stevedoring Industry Finance Committee Act 1977*, the *Port Statistics Act 1977* and Part VI, Division 9, of the *Industrial Relations Act 1988*.

(b) Port authority reforms. A meeting with State and Northern Territory government ministers was held on 11 August 1989 at which the States endorsed the Commonwealth Government's approach and undertook to pursue reform of port authority operations consistent with the ISC's recommendations. Following a meeting of the Australian Transport Advisory Council on 25 May 1990 the States and the Northern Territory committed themselves to public accountability by progressing their reforms through the release of reform timetables and regular reporting, including performance indicators. Ways in which port authorities might act to improve port services in a competitive environment are also being examined.

(c) Ensuring a more competitive commercial environment on the waterfront. Additional resources have been allocated to the Trade Practices Commission to enable it to effectively apply the Trade Practices Act to the waterfront industry, including the scrutiny of uncompetitive practices in the container depot industry. The Prices Surveillance Authority (PSA) has been directed to review pricing practices in the stevedoring industry and to develop a monitoring system to ensure the benefits of reform are passed on to users.

Shipping reform

In June 1989, the Government announced a three year shipping reform strategy, based on the recommendations of the Shipping Reform Task Force (SRTF) which provides a blueprint for improving the efficiency and competitiveness of Australian shipping into the nineties.

The main elements of the strategy are:

- reductions in the crew sizes of new and existing ships which will see a reduction in the workforce of some 20 per cent (about 1,000) by 1992;
- extension until mid-1997 of the present fiscal regime of capital grants and accelerated depreciation to encourage the introduction of new and efficient ships;
- expansion until mid-1992 of the capital grants scheme to cover the cost of modifying existing ships for operation with smaller crews;
- a voluntary early retirement scheme for seafarers affected by recrewing;
- expansion of training and retraining programs for the seagoing workforce aimed at broadening skills through the concept of multi-skilling; and
- development of more flexible guidelines (including permits for continuous trading) for the permit system which allows unlicensed ships to carry coastal cargoes when suitable licensed ships are unavailable.

The Shipping Industry Reform Authority (SIRA) was established for three years to oversee the detailed development and implementation of the strategy.

During the first quarter of 1990, recrewing led to a reduction of 290 ratings on existing ships. A further reduction of 180 ratings is expected to occur in 1990–91 and, by mid-1992, about 170 officers will leave the industry as radio officer and electrical officer job categories are phased out. By mid-1992, once this recrewing program has been completed and new ships currently on order have been introduced with low crews, the average crew on an Australian ship will be 21, in line with the average crew on the ships of other OECD nations. This compares with an average crew of 29 at the end of 1988, prior to the commencement of the shipping reform program.

To see that the benefits of reform are passed on to users, the PSA is to monitor coastal freight rates.

New guidelines allowing greater flexibility in the issue of single voyage coastal trade permits and the reintroduction of continuing voyage permits took effect from 1 March 1990.

Towage reform

The Government's towage reform program was introduced in December 1989 and primarily focuses on reducing labour costs, a major cost factor within the industry, through a review of work practices and the numbers of personnel required to operate Australian tugs.

The main elements of the program are:

- reductions in harbour tug crews to five in early 1990;
- further reductions to a maximum crew of four by mid-1992;
- a major review of work practices in ports, including roster arrangements, leading to further reductions in the number of tug crews required at individual ports; and
- voluntary early retirement and associated training schemes for those affected by reform.

The first phase of crew reductions to five is largely completed with 73 crew having left the industry under voluntary early retirement.

The Port Practices Review had by mid-1990, identified a wide range of changes to work practices in individual ports (including increased flexibility of rostering and leave arrangements, more effective tug deployment, and reduced reliance on casual labour for relief purposes) which would allow the removal of 41 jobs from the industry. These changes will improve industry service and reduce costs.

The next phase in the reform program, the move to a maximum crew of four on harbour tugs, is dependant on the introduction of training schemes and/or the introduction of new tugs, with all new tugs to be crewed at four when they are introduced. Although the precise timing of further reductions on existing tugs is not yet finalised, the progressive implementation of this element of the reform program is expected to commence by mid-1991.

The PSA is conducting an inquiry into towage charges to ensure that users benefit from towage reform through reduced charges.

In addition to these operational changes, ways are also being sought, in cooperation with State Governments, to increase competitive influences on the industry to further improve efficiency.

The Trade Practices Commission (TPC) is also reviewing past authorisation of agreements that limit competition in harbour towage services in the ports of Sydney, Melbourne, Botany Bay and Newcastle.

Tasmanian Freight Equalisation Scheme

The Tasmanian Freight Equalisation Scheme was first introduced in July 1976 following the Nimmo Commission of Inquiry into transport to and from Tasmania. It was revised in 1985 following the Government's consideration of the Inter-State Commission's March 1985 report.

The Scheme is designed to alleviate the comparative freight cost disadvantage of shipping certain non-bulk goods by sea between Tasmania and the mainland. Responsibility for administration of the Scheme lies within the Transport and Communications portfolio.

The northbound component of the Scheme covers eligible goods produced or manufactured in Tasmania for use or sale on the mainland. The southbound component covers eligible non-consumer raw materials, machinery and equipment for use in manufacturing, mining, agriculture, forestry and fishing industries in Tasmania. In 1989–90, $31.7 million in assistance was paid on the northbound component and $4.8 million on the southbound component.

Trade Practices Act

Part X of the Trade Practices Act (as amended by the *Trade Practices (International Liner Cargo Shipping) Amendment Act 1989*) provides a regulatory framework for Australia's international liner trades and encourages a more competitive shipping environment for the benefit of Australian exporters. Under the amended legislation, shipping conferences (cartels) now receive only limited exemption from the Act's competition provisions for registered agreements.

The new law seeks to:

- ensure that Australian exporters have continued access to outwards liner cargo shipping services of adequate frequency and reliability at freight rates that are internationally competitive;
- promote conditions in the international liner cargo shipping industry that encourages stable access to export markets for exporters in all States and Territories; and
- ensure that efficient Australian flag shipping is not unreasonably hindered from normal participation in any outwards liner cargo shipping trade.

The creation of a more competitive liner shipping environment is being encouraged by the introduction of a number of important mechanisms. Exemption from the restrictive trade practice provisions of the Trade Practices Act is limited to conduct by conference shipping services which is of benefit to Australian exporters. Appropriate pro-competitive provisions of the Trade Practices Act are applied to ocean carriers, including section 46 which prohibits misuse of market power and a provision based on section 49 which prohibits discrimination between like placed shippers.

There is also a requirement for conference agreements to be publicly available and to comply with minimum standards, and for conferences to take part in negotiations with a designated shipper body over minimum service levels, freight rates and service arrangements.

The Trade Practices Commission and the Trade Practices Tribunal have investigating and reporting powers in relation to conference agreements, non-conference ocean carriers with a substantial degree of market power and unfair pricing practices.

Sea Carriage of Goods Act

The *Sea Carriage of Goods Act 1924*, provides for regulation of carriers' responsibilities and liabilities in sea borne trades. The Act is based on an international convention known as the Hague Rules which came into effect in 1924.

The Hague Rules, and consequently the Act, have become technically deficient in a number of areas and in June 1988, the Government announced it would amend the Act to take into account international trends in marine cargo liability regulation. Australia will formally adopt and implement the Visby and SDR Protocols to the Hague Rules. This will bring Australian legislation into line with practices in the major European countries. The amended Act will also provide a mechanism for the future implementation of the Hamburg Rules, a United Nations Convention on the Carriage of Goods by Sea, when these Rules have gained wider international acceptance and represent a viable alternative for Australia.

Marine pollution

The *Protection of the Sea (Prevention of Pollution from Ships) Act 1983*, the *Navigation (Protection of the Sea) Amendment Act 1983*, the *Protection of the Sea (Powers of Intervention) Act 1981*, the *Protection of the Sea (Civil Liability) Act 1981*, the *Protection of the Sea (Shipping Levy) Act 1981* and the *Protection of the Sea (Shipping Levy Collection) Act 1981* currently provide the Commonwealth with the power to deal with matters relating to marine pollution.

The Acts respectively provide for the control of discharges at sea and provision of control equipment and procedures on ships; empower the Minister to intervene to take action to prevent or reduce pollution, make provision relating to limitation of liability of oil tankers for oil pollution damage; and provide for the collection of a levy to finance the National Plan to Combat Pollution of the Sea by Oil.

Shipping and Air Cargo Commodity Statistics

Source of data

Shipping and Air Cargo Commodity Statistics (SACCS) are compiled from information contained in import and export documents submitted by importers and exporters or their agents to the Australian Customs Service (ACS).

Data are augmented with information from Lloyd's Register of Shipping to enable classification by selected shipping characteristics such as ship type and country of registration.

The scope of the statistics

Inward commodity statistics relate to cargo loaded overseas, discharged from ships and aircraft at Australian ports and for which Customs' import documents have been received by the ABS.

Similarly, outward commodity statistics relate to cargo loaded on ships and aircraft at Australian ports for discharge at overseas ports and for which Customs' export documents have been received by the ABS.

The commodity statistics include cargo shipped by sea and air and include Australian produce and re-exports of foreign produce.

Ship movement statistics relate to visits made to Australian ports by ships engaged in overseas voyages.

Commodity classification

Commodities are classified according to the Australian Transport Freight Commodity Classification (ATFCC). The ATFCC is the Australian standard for classifying goods transported by any of the transport modes (sea, rail, road and air). It is a four level classification based on the third revision of the United Nations' Standard International Trade Classification (SITC Rev. 3).

Time of recording

SACCS data are compiled according to the date of arrival or departure of the ship or aircraft concerned at Australian ports. SACCS data are therefore not directly comparable to foreign trade statistics which are compiled according to the month in which relevant documents are finalised by the ACS and passed to the ABS for further processing.

Valuation

The recorded value of inward cargo is the free on board (FOB) Customs value. The value of outward cargo is the FOB transactions value of the goods expressed in Australian dollars.

Unit of quantity

SACCS data record commodity movements in gross weight tonnes which is the total weight of cargo, irrespective of the basis on which freight is charged. It includes the weight of moisture content, wrappings, crates, boxes, and containers (other than standard international containers used for containerised cargo).

Statistics are also included on deadweight tonnage which is the displacement of a fully loaded ship, less the weight of the ship itself.

Ship type

All ships are classified from Lloyd's Register of Shipping according to one of 11 ship types in terms of their structure or design. These 11 ship types are amalgamated into four categories as follows:

Category	*Ship types*
General cargo ships	Container ships
	Conventional cargo ships
	Roll-on/Roll-off ships
	Multi-purpose ships
Tankers	Gas carriers
	Liquid tankers
Bulk carriers	Dry bulk carriers
	Dry/wet bulk carriers
Other ships	Passenger ships
	Livestock carriers
	Other ships

Ship characteristics

Ships are also classified according to the type of service they provide. The two types of service for which statistics are shown are:

- *Liner service* which relates specifically to a ship operated by a carrier providing services on a specified route on a relatively regular basis; and
- *Other service* which refers to all ships operating on other than a liner service.

Liner service is further broken down into conference and non-conference. A *conference* is an association of ship owners which regulate the freight rates and terms and conditions of carriage of goods in any particular trade. Conference agreements exist only in respect of liner services and normally include provisions for sharing the trade, rationalising sailing schedules, and pooling arrangements for resources and/or revenue.

The ABS completes periodic analysis of the type of service on which a vessel has been engaged. These details are used in this publication to classify vessel data by type of service. For vessels calling infrequently, or for those frequently changing the type of service under which they operate, the service status may not be appropriate to the current period data.

Ship calls refers to the number of port visits made to Australian ports by ships engaged in overseas voyages.

Country of registration or flag of the ship, refers to the country in which the ship is registered according to Lloyd's Register of Shipping.

Geographic terms

For inward cargo, the port of loading is the overseas port at which the cargo is loaded onto the ship or aircraft. This port is not necessarily in the country of origin of the cargo. The port of discharge is the Australian port at which the cargo is unloaded from the ship or aircraft.

For outward cargo, the port of loading is the Australian port at which the cargo is loaded onto the ship or aircraft. The port of loading is not necessarily in the State of origin of the cargo. The port of discharge is the overseas port at which the cargo is unloaded from the ship or aircraft. The port of discharge is not necessarily in the country of final destination as the cargo may be subsequently trans-shipped.

The State of origin is defined as the State in which the final stage of production or manufacture occurred.

Australian Trading Ships

SUMMARY OF THE AUSTRALIAN TRADING FLEET OF SHIPS 150 GROSS TONNES OR MORE, 30 JUNE 1989
(*Source*: Department of Transport and Communications)

Ships	*Number*	*DWT*	*Gross tonnes*
Major Australian fleet*(a)*			
Coastal—			
Australian owned and registered	32	1,268,313	881,986
Australian owned, overseas registered	1	35,244	20,570
Overseas owned, Australian registered	7	78,725	54,492
Overseas owned and registered	3	17,056	10,303
Coastal fleet	*43*	*1,399,338*	*967,351*
Overseas—			
Australian owned and registered	18	1,600,785	964,627
Australian owned, overseas registered	1	41,151	29,223
Overseas owned, Australian registered	13	609,433	458,185
Overseas owned and registered	1	2,925	2,610
Overseas fleet	*33*	*2,254,294*	*1,454,645*
Major Australian fleet	*76*	*3,653,632*	*2,421,996*
Other trading ships			
Australian owned and registered	18	9,868	10,848
Australian trading fleet	**94**	**3,663,500**	**2,432,844**

(a) 2,000 DWT and over.

The above table shows particulars of all Australian trading ships of 150 gross tonnes or more engaged in the regular overseas, interstate or intrastate services at 30 June 1989.

Ships registered in Australia

The following table shows the number of ships registered in Australia at 30 June 1990.

SHIPS REGISTERED IN AUSTRALIA AT 30 JUNE 1990
(*Source*: Department of Transport and Communications)

	Nature of registration					
Location	*Demise chartered(a)*	*Other(b)*	*Government*	*Fishing*	*Pleasure*	*Total*
New South Wales	6	239	3	272	1,357	1,877
Victoria	4	104	5	177	453	743
Queensland	5	284	28	628	944	1,889
Western Australia	5	126	3	382	427	943
South Australia	—	40	3	262	210	515
Tasmania	—	56	4	214	170	444
Northern Territory	2	18	1	56	159	236
Total	**22**	**867**	**47**	**1,991**	**3,720**	**6,647**

(a) A demise chartered ship is a foreign owned ship chartered by way of a charter party to an Australian based operator, who is an Australian national and who under the charter party has whole possession and control of the ship, including the right to appoint the master and crew of the ship. *(b)* Relates to vessels used for commercial purposes.

Overseas Shipping

Ship movements into and out of Australia

The following table shows particulars of overseas shipping which arrived at or departed from Australian ports according to the country of registration of the ships.

OVERSEAS SHIPPING: SHIP ARRIVALS AND DEPARTURES BY COUNTRY OF SHIP REGISTRATION, 1988–89

	Ship Arrivals		*Ship Departures*	
Country of registration	*Ship calls*	*DWT ('000 tonnes)*	*Ship calls*	*DWT ('000 tonnes)*
Australia	633	30,767	604	28,440
China	418	15,966	433	16,368
Denmark	24	344	21	310
Germany, Federal Republic of	305	5,097	304	5,111
Greece	594	26,388	588	26,291
Hong Kong	391	18,096	372	17,491
India	121	4,820	122	4,848
Japan	1,233	94,240	1,211	91,980
Korea, Republic of	313	21,537	296	20,438
Liberia	829	36,404	831	35,502
Malaysia	260	5,187	244	4,925
Netherlands	183	2,712	187	2,799
New Zealand	224	3,874	228	3,935
Norway	48	1,263	51	1,396
Panama	1,898	46,595	1,900	46,448
Philippines	840	30,269	836	31,259
Singapore	465	16,663	458	16,618
Sweden	39	1,793	41	1,827
Taiwan	223	17,818	229	18,384
United Kingdom	440	13,920	424	13,565
United States of America	10	152	11	255
USSR	360	5,328	358	5,328
Other countries	1,980	55,929	1,978	54,612
Total all countries	**11,831**	**455,162**	**11,727**	**448,130**

Shipping at principal ports

The following table shows the movement of overseas shipping and cargo at Australian ports during 1988–89. It provides details of the ships calling at Australian ports and the gross weight of cargo loaded and discharged.

OVERSEAS SHIP AND CARGO MOVEMENTS AT AUSTRALIAN PORTS, 1988–89

	Ship Arrivals		*Cargo discharged*	*Ship Departures*		*Cargo loaded*
Australian port	*Ship calls*	*DWT ('000 tonnes)*	*Gross weight ('000 tonnes)*	*Ship calls*	*DWT ('000 tonnes)*	*Gross weight ('000 tonnes)*
New South Wales—						
Sydney	1,115	23,251	6,363	1,060	22,118	4,258
Botany Bay	572	12,218	50	550	9,285	270
Newcastle	713	41,159	1,631	719	41,193	30,846
Port Kembla	280	17,524	1,028	279	17,384	9,725
Other	95	2,968	1,903	95	5,429	1,019
Total	*2,775*	*97,120*	*10,975*	*2,703*	*95,409*	*46,118*
Victoria—						
Melbourne	1,388	27,183	5,049	1,431	28,242	3,653
Geelong	254	8,120	2,308	258	7,995	1,753
Other	231	7,939	485	222	7,776	3,415
Total	*1,873*	*43,242*	*7,842*	*1,911*	*44,013*	*8,821*

OVERSEAS SHIP AND CARGO MOVEMENTS AT AUSTRALIAN PORTS, 1988–89—*continued*

Australian port	*Ship Arrivals*		*Cargo discharged*	*Ship Departures*		*Cargo loaded*
	Ship calls	*DWT ('000 tonnes)*	*Gross weight ('000 tonnes)*	*Ship calls*	*DWT ('000 tonnes)*	*Gross weight ('000 tonnes)*
Queensland—						
Brisbane	1,195	26,005	2,262	1,178	25,568	6,160
Cairns	106	1,105	91	103	1,026	540
Townsville	344	4,757	533	336	4,471	1,703
Other	1,290	83,720	660	1,260	82,588	64,322
Total	*2,935*	*115,587*	*3,546*	*2,877*	*113,653*	*72,725*
South Australia—						
Port Adelaide	421	8,997	742	410	8,731	1,449
Port Pirie	45	1,005	28	51	1,143	634
Other	243	9,051	1,719	237	8,754	3,192
Total	*709*	*19,053*	*2,489*	*698*	*18,628*	*5,275*
Western Australia—						
Fremantle	1,123	29,903	1,258	1,122	29,304	8,360
Port Hedland	367	38,260	135	357	36,020	32,514
Other	1,184	86,477	5,358	1,210	87,443	80,569
Total	*2,674*	*154,640*	*6,751*	*2,689*	*152,767*	*121,443*
Tasmania—						
Hobart	131	2,810	121	135	2,560	238
Launceston	160	5,118	110	150	4,973	2,835
Burnie	136	2,858	95	136	2,822	371
Other	94	5,009	54	85	3,788	2,839
Total	*521*	*15,795*	*380*	*506*	*14,143*	*6,283*
Northern Territory—						
Darwin	173	2,526	296	171	2,472	1,475
Other	171	7,199	875	172	7,045	5,142
Total	*344*	*9,725*	*1,171*	*343*	*9,517*	*6,617*
Total Australia	**11,831**	**455,162**	**33,155**	**11,727**	**448,130**	**267,284**

Overseas cargo according to trade area and ship type

The following two tables show details of cargo discharged in Australia from overseas, and cargo loaded in Australia for discharge overseas, classified according to the various trade areas of the world and by ship type.

INWARD OVERSEAS SEA CARGO BY TRADE AREA OF PORT OF LOADING BY SHIP TYPE, 1988–89
('000 tonnes)

Trade area	*General cargo*	*Tanker*	*Bulk carrier*	*Other ships*	*Total ships*
Europe—Atlantic	1,316	317	459	13	2,105
Europe—Baltic—Western	223	5	37	—	265
Europe—Baltic—Eastern	25	49	—	—	74
Europe—Mediterranean—Western	561	105	97	3	767
Europe—Mediterranean—Eastern	55	—	—	—	55
East Asia	1,016	139	215	4	1,373
Japan and North Asia	1,204	157	1,752	7	3,119
North America—West Coast	938	276	2,361	29	3,604
North America—East Coast	774	739	1,180	44	2,737
Central America and Caribbean	35	8	46	—	88
South America—West Coast	31	—	24	67	122
South America—East Coast	281	46	292	1	621
Africa—Mediterranean	1	—	—	—	1
West Africa	1	—	528	—	529
South and East Africa	120	—	14	1	136
Red Sea and Mediterranean Middle East	68	214	175	—	456

INWARD OVERSEAS SEA CARGO BY TRADE AREA OF PORT OF LOADING BY SHIP TYPE, 1988–89—*continued*
('000 tonnes)

Trade area	*General cargo*	*Tanker*	*Bulk carrier*	*Other ships*	*Total ships*
Middle East Gulf	128	6,925	393	72	7,518
West India	72	—	354	2	428
East India	97	—	17	2	116
South East Asia	1,229	3,780	715	190	5,913
New Zealand	512	614	557	75	1,757
Papua New Guinea and Solomon Islands	49	54	23	4	130
Pacific Islands and other countries	72	—	1,090	6	1,168
Trade area not available	45	1	27	—	72
Total inward overseas cargo	**8,852**	**13,428**	**10,356**	**517**	**33,155**

OUTWARD OVERSEAS SEA CARGO BY TRADE AREA OF PORT OF DISCHARGE BY SHIP TYPE, 1988–89
('000 tonnes)

Trade area	*General cargo*	*Tanker*	*Bulk carrier*	*Other ships*	*Total ships*
Europe—Atlantic	725	148	30,589	4	31,466
Europe—Baltic—Western	20	21	978	66	1,085
Europe—Baltic—Eastern	285	—	629	—	914
Europe—Mediterranean—Western	443	10	6,230	—	6,683
Europe—Mediterranean—Eastern	85	—	3,211	—	3,296
East Asia	1,593	846	29,263	34	31,736
Japan and North Asia	5,185	1,937	132,200	441	139,763
North America—West Coast	550	1,496	4,241	1	6,288
North America—East Coast	335	480	5,359	—	6,174
Central America and Caribbean	21	23	47	—	91
South America—West Coast	60	9	431	—	500
South America—East Coast	15	—	1,942	—	1,957
Africa—Mediterranean	154	54	2,258	—	2,466
West Africa	33	—	630	—	663
South and East Africa	70	79	154	4	307
Red Sea and Mediterranean Middle East	141	—	1,932	—	2,073
Middle East Gulf	461	56	3,680	—	4,197
West India	225	28	4,950	—	5,203
East India	170	80	1,213	—	1,463
South East Asia	1,692	1,047	4,398	30	7,167
New Zealand	403	527	1,049	—	1,979
Papua New Guinea and Solomon Islands	392	413	1,002	8	1,815
Pacific Islands and other countries	253	653	220	1	1,127
Trade area not available	628	—	8,018	225	8,871
Total outward overseas cargo	**13,939**	**7,907**	**244,624**	**814**	**267,284**

Overseas cargo commodity details

The following three tables classify inward and outward overseas cargo according to the Australian Transport Freight Commodity Classification (ATFCC). The second and third tables also provide details of the type of shipping service by which cargo was transported.

INWARD AND OUTWARD OVERSEAS SEA CARGO: BY COMMODITY, 1988–89
($ million)

ATFCC Division	*Title*	*Inward cargo*	*Outward cargo*
00	Live animals	17	252
01	Meat and meat preparations	16	2,126
02	Dairy products and birds' eggs	88	584
03	Fish, crustaceans, molluscs and aquatic invertebrates	405	522
04	Cereals and cereal preparations*(a)*	70	2,797
05	Vegetables and fruit	357	478
06	Sugar, sugar preparations and honey	43	924
07	Coffee, tea, cocoa, spices and manufactures thereof*(a)*	283	33
08	Feeding stuff for animals	75	252
09	Miscellaneous edible products and preparations	236	130
11	Beverages*(a)*	279	160
12	Tobacco and tobacco manufactures*(b)*	90	18
21	Hides, skins and furskins*(a)*	9	361
22	Oil seeds and oleaginous fruits*(b)*	48	70
23	Crude rubber*(a)(b)*	109	9
24	Cork and wood*(a)*	564	17
25	Pulp and waste paper	225	35
26	Textile fibres and their wastes*(a)*	174	6,048
27	Fertilisers and minerals, crude*(a)*	272	168
28	Metalliferous ores and metal scrap*(a)*	73	2,729
29	Crude animal and vegetable materials, n.e.s.*(a)(b)*	75	99
32	Coal, coke and briquettes*(a)*	9	3,479
33	Petroleum, petroleum products and related materials*(a)*	1,914	1,097
34	Gases, natural and manufactured*(a)(b)*	4	—
41	Animals oils and fats*(a)*	2	22
42	Fixed vegetable oils and fats, crude, refined or fractionated*(a)(b)*	100	10
43	Animal and vegetable fats and oils, processed, and waxes of animal or vegetable origin*(a)(b)*	12	5
51	Organic chemicals*(a)*	853	48
52	Inorganic chemicals*(a)*	362	86
53	Dyeing, tanning and colouring materials*(a)*	197	142
54	Medicinal and pharmaceutical products	295	63
55	Essential oils, perfume materials*(a)*	224	76
56	Fertilisers, manufactured	216	8
57	Plastics in primary forms*(a)*	308	143
58	Plastics in non-primary forms*(a)*	369	24
59	Chemical materials and products*(a)*	485	131
61	Leather, leather manufactures*(b)*	73	124
62	Rubber manufactures*(a)*	515	58
63	Cork and wood manufactures*(a)*	205	9
64	Paper, paperboard and articles of paper	1,269	117
65	Textile yarn, fabrics, made-up articles, n.e.s.*(a)*	1,734	74
66	Non-metallic mineral manufactures, n.e.s.*(a)*	760	100
67	Iron and steel*(a)*	889	463
68	Non-ferrous metals*(a)*	238	3,771
69	Manufactures of metal, n.e.s.*(a)*	971	273
71	Power generating machinery and equipment	798	243
72	Machinery specialised for particular industries*(a)*	2,057	252
73	Metalworking machinery	322	23
74	General industrialised machinery and equipment*(a)*	1,874	225
75	Office machines and ADP equipment	1,047	33
76	Telecommunications and sound recording or reproducing apparatus and equipment*(a)*	991	22
77	Electrical machinery, apparatus and appliances*(a)*	1,285	148
78	Road vehicles	4,742	355
79	Other transport equipment	328	75
81	Prefabricated buildings, sanitary plumbing, heat and light fixtures and fittings*(b)*	110	24
82	Furniture and parts thereof	279	31
83	Travel goods, handbags and similar containers*(b)*	138	1
84	Articles of apparel and clothing accessories	536	11
85	Footwear	300	4

For footnotes *see* end of table.

INWARD AND OUTWARD OVERSEAS SEA CARGO: BY COMMODITY, 1988–89—*continued*
($ million)

ATFCC Division	*Title*	*Inward cargo*	*Outward cargo*
87	Professional, scientific and controlling apparatus*(a)*	435	29
88	Photographic apparatus, equipment and supplies*(a)*	326	89
89	Miscellaneous manufactured articles*(a)*	1,864	178
93	Special transactions and commodities not classified by kind*(b)*	28	144
96	Coins, not being legal tender*(b)*	—	—
97	Gold, non-monetary*(b)*	—	—
99	Other commodities and transactions*(c)*	2,884	7,576
Total all commodities		**35,857**	**37,597**

(a) Excludes import commodities regarded as confidential. These items are included in Division 99. *(b)* Excludes export commodities regarded as confidential. These items are included in Division 99. *(c)* Includes commodities regarded as confidential.

OVERSEAS SEA CARGO BY COMMODITY BY TYPE OF SERVICE, 1988–89
($ million)

	Liner Service			
ATFCC Section and title	*Conference*	*Non-conference*	*Other*	*Total*
	INWARD			
0 Food and live animals*(a)*	906	428	257	1,591
1 Beverages and tobacco	172	142	56	369
2 Crude materials, inedible, except fuels*(a)*	482	429	639	1,549
3 Mineral fuels, lubricants and related materials*(a)*	30	20	1,875	1,927
4 Animal and vegetables oils, fats and waxes*(a)*	34	12	69	115
5 Chemicals and related products*(a)*	1,483	864	962	3,309
6 Manufactured goods classified chiefly by material*(a)*	3,231	1,960	1,463	6,654
7 Machinery and transport equipment*(a)*	6,176	2,410	4,857	13,443
8 Miscellaneous manufactured articles*(a)*	2,250	1,072	666	3,988
9 Commodities and transactions*(b)*	1,185	596	1,131	2,912
Total all commodities	**15,949**	**7,936**	**11,973**	**35,857**
	OUTWARD			
0 Food and live animals*(a)*	2,973	970	4,154	8,098
1 Beverages and tobacco*(a)*	84	65	29	178
2 Crude materials, inedible, except fuels*(a)*	4,198	1,668	3,669	9,536
3 Mineral fuels, lubricants and related materials*(a)*	16	19	4,541	4,576
4 Animal and vegetable oils, fats and waxes*(a)*	8	6	23	37
5 Chemicals and related products*(a)*	296	266	160	722
6 Manufactured goods, classified chiefly by material*(a)*	1,400	1,312	2,277	4,989
7 Machinery and transport equipment*(a)*	640	458	278	1,376
8 Miscellaneous manufactured articles*(a)*	179	133	54	366
9 Commodities and transactions*(b)*	1,001	484	6,234	7,720
Total all commodities	**10,795**	**5,381**	**21,420**	**37,597**

(a) Excludes commodities regarded as confidential. These items are included in Section 9. *(b)* Includes commodities regarded as confidential.

Coastal Shipping Cargo

The following table shows the gross weight of shipping cargo loaded at an Australian port for discharge at another Australian port. Both interstate and intrastate cargo movements are included. Cargo loaded at, or to be discharged at, an overseas port is excluded.

COASTAL CARGO LOADED AND DISCHARGED AT AUSTRALIAN PORTS, 1988-89
OUTWARD OVERSEAS SEA CARGO BY COMMODITY BY TYPE OF SERVICE
(*Source*: **Department of Transport and Communications**)
('000 Gross Weight Tonnes)

	Loaded			*Discharged*		
Australian port	*Interstate*	*Intrastate*	*Total*	*Interstate*	*Intrastate*	*Total*
New South Wales—						
Sydney	117	—	117	2,542	704	3,246
Port Kembla	1,317	20	1,337	6,089	22	6,111
Botany Bay	360	216	576	3,377	—	3,377
Other	439	1,396	1,835	2,171	906	3,077
Total	*2,233*	*1,632*	*3,865*	*14,179*	*1,632*	*15,811*
Victoria—						
Melbourne	*1,527*	*30*	*1,557*	*2,218*	*3*	*2,221*
Geelong	*1,148*	*144*	*1,292*	*340*	*32*	*372*
Westernport	*6,258*	*2*	*6,260*	*720*	—	*720*
Other	—	—	—	*596*	*141*	*737*
Total	*8,933*	*176*	*9,109*	*3,874*	*176*	*4,050*
Queensland—						
Brisbane	*756*	*1,327*	*2,083*	*5,038*	*497*	*5,535*
Gladstone	*1,528*	*497*	*2,025*	*43*	*6,768*	*6,811*
Other	*1,248*	*6,584*	*7,832*	*310*	*1,143*	*1,453*
Total	*3,532*	*8,408*	*11,940*	*5,391*	*8,408*	*13,799*
South Australia—						
Adelaide	*568*	*58*	*626*	*299*	*1,024*	*1,323*
Port Stanvac	*371*	—	*371*	*284*	*806*	*1,090*
Other	*3,249*	*2,066*	*5,315*	*1,351*	*294*	*1,645*
Total	*4,188*	*2,124*	*6,312*	*1,934*	*2,124*	*4,058*
Western Australia—						
Fremantle	*818*	*882*	*1,700*	*366*	*315*	*681*
Other	*6,304*	*385*	*6,689*	*59*	*952*	*1,011*
Total	*7,122*	*1,267*	*8,389*	*425*	*1,267*	*1,692*
Tasmania—						
Hobart	*433*	*44*	*477*	*851*	*126*	*977*
Burnie	*599*	*126*	*725*	*681*	*44*	*725*
Devonport	*476*	—	*476*	*331*	—	*331*
Launceston	*346*	*14*	*360*	*1,064*	*18*	*1,082*
Other	*750*	*19*	*769*	*124*	*15*	*139*
Total	*2,604*	*203*	*2,807*	*3,051*	*203*	*3,254*
Northern Territory—						
Darwin	*3*	*41*	*44*	*177*	*5*	*182*
Other	*417*	*5*	*422*	—	*41*	*41*
Total	*420*	*46*	*466*	*177*	*46*	*223*
Total all ports	**29,031**	**13,856**	**42,887**	**29,031**	**13,856**	**42,887**

RAILWAYS

Government Railways

The six government owned railway systems are operated by the State Rail Authority of New South Wales (SRA), 'V/Line' operated by the State Transport Authority of Victoria, Queensland Railways (QR) operated by the Queensland Department of Transport, Western Australian Government Railways Commission (WAGRC), the State Transport Authority of South Australia (STA), and the Australian National Railways Commission (ANRC).

Data contained in the following tables have been compiled from a number of sources. These sources include annual reports of the various rail authorities; data supplied by the Rail Industry Council; and data collected directly by the Australian Bureau of Statistics.

As the Australian National system includes routes in more than one State, and the Victorian system extends into New South Wales, the system route-kilometres shown in the following table do not represent route-kilometres within each State and Territory.

GOVERNMENT RAILWAYS: ROUTE-KILOMETRES OPEN, BY SYSTEM
(kilometres)

30 June	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Australian National*	*Aust.*
1984	9,884	5,929	10,231	152	5,623	7,450	39,269
1985	9,908	5,894	10,231	153	5,563	7,465	39,214
1986	9,909	5,518	10,244	153	5,553	7,333	38,710
1987	9,909	5,403	10,210	149	5,553	7,315	38,539
1988	9,917	5,289	10,089	127	5,553	7,187	38,162
1989	7,755	5,186	10,094	125	5,553	7,050	35,763

Summary of Operations

Particulars of train-kilometres, passenger journeys, freight-tonnes carried, and freight tonne-kilometres included in this section refer only to operations for which revenue is received.

GOVERNMENT RAILWAYS: SUMMARY OF OPERATION, SYSTEMS, 1988–89

	NSW	*Vic.*	*Qld*	*SA*	*WA*	*Australian National*	*Aust.*
Train-kilometres ('000)*(a)(b)*—							
Suburban passenger	32,457	13,800	6,746	n.a.	2,236	—	n.a.
Country passenger	10,940	7,225	3,646	—	1,159	2,396	25,366
Goods*(b)*	22,519	5,801	23,180	—	6,077	8,259	65,836
Total	**65,916**	**26,826**	**33,572**	**n.a.**	**9,472**	**10,655**	**n.a.**
Passenger journeys ('000)*(c)*—							
Suburban	246,087	93,500	49,418	7,023	9,396	—	405,424
Country*(d)*	3,209	5,825	1,525	—	323	350	11,232
Total	**249,296**	**99,325**	**50,943**	**7,023**	**9,719**	**350**	**416,656**
Freight—							
Tonnes carried ('000)*(d)*	50,188	9,950	80,508	—	24,294	13,821	178,761
Net tonne-kilometres (million)*(e)*	13,552	3,271	20,884	—	4,881	8,082	50,670

(a) One train (i.e. a complete unit of locomotive and vehicles, electric train set, or rail motor) travelling one kilometre for revenue purposes. *(b)* Includes mixed train-kilometres. *(c)* Based on ticket sales making allowances for periodical tickets. Tickets sold at concession rates are counted as full journeys. *(d)* Inter-system traffic is included in the total for each system over which it passes. *(e)* One tonne carried one kilometre.

GOVERNMENT RAILWAYS: TRAIN-KILOMETRES(a)
('000 kilometres)

Year	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Australian National*	*Aust.*
1983–84	61,659	30,702	33,303	3,697	10,333	10,238	149,932
1984–85	66,025	30,794	34,293	n.a.	11,098	11,306	n.a.
1985–86	62,237	29,809	35,116	n.a.	10,364	10,513	n.a.
1986–87	n.a.	28,399	35,051	n.a.	9,436	10,581	n.a.
1987–88	61,954	27,435	34,099	n.a.	9,465	10,680	n.a.
1988–89	61,503	26,826	33,572	n.a.	9,472	10,654	n.a.

(a) One train (i.e. a complete unit of locomotive and vehicles, electric train set, or rail motor) travelling one kilometre for revenue purpose.

GOVERNMENT RAILWAYS: FREIGHT CARRIED, NET TONNE-KILOMETRES, AND FREIGHT EARNINGS, SYSTEMS

Year	NSW	Vic.	Qld	WA	Australian National	Aust.
			FREIGHT CARRIED ('000 tonnes)			
1983–84	46,594	10,486	53,150	19,870	12,083	142,183
1984–85	47,800	11,892	65,452	22,085	12,870	160,099
1985–86	53,800	10,516	73,599	20,877	13,049	171,841
1986–87	54,747	10,597	75,169	21,264	12,900	174,677
1987–88	54,412	10,901	74,893	21,946	11,269	173,421
1988–89	50,188	9,950	80,508	24,294	13,821	178,761
			NET TONNE-KILOMETRES (million)			
1983–84	11,131	3,111	15,391	3,903	5,912	39,448
1984–85	12,393	3,543	18,438	4,328	6,270	44,972
1985–86	r13,415	3,094	20,450	4,005	7,081	48,045
1986–87	13,540	3,531	20,871	4,062	6,873	48,877
1987–88	14,212	3,351	20,676	4,203	7,165	49,607
1988–89	13,552	3,271	20,884	4,881	8,082	50,670
			FREIGHT EARNINGS ($'000)			
1983–84	559,876	160,841	669,362	180,439	192,223	1,762,741
1984–85	641,100	182,259	828,926	209,627	213,698	2,075,610
1985–86	736,795	168,641	905,494	200,974	237,345	2,249,249
1986–87	739,250	174,700	960,950	200,731	238,097	2,313,728
1987–88	767,820	176,161	910,409	204,330	236,782	2,295,502
1988–89	667,038	166,526	1,021,272	231,749	284,905	2,137,490

GOVERNMENT RAILWAYS: GROSS EARNINGS, SYSTEMS(a)
($ million)

Year	NSW	Vic.(b)	Qld	SA(c)	WA	Australian National(d)	Aust.
1983–84	823.1	301.7	718.0	8.1	228.3	227.1	2,306.3
1984–85	938.6	343.7	882.5	10.7	258.3	252.5	2,686.3
1985–86	1,082.4	326.7	966.0	14.6	256.0	283.3	2,929.0
1986–87	1,121.2	384.2	1,028.9	14.4	258.2	283.3	3,090.2
1987–88	(a)1,248.9	384.2	991.4	15.4	266.3	290.5	3,196.7
1988–89	1,114.1	n.a.	1,107.1	17.6	306.2	315.8	n.a.

(a) Excludes Commonwealth contributions and superannuation reserve. *(b)* Includes operating revenue for VLINE and fares for VLINE and MTA. *(c)* Includes urban rail operations only. *(d)* Includes Tasmania.

Non-government Railways

The Australian non-government railways covered in this section are those which operate outside industrial estates, harbour precincts, mines and quarries with a route distance exceeding two kilometres.

The figures in the following table have been compiled from information supplied to the Bureau of Transport and Communications Economics (BTCE) by the various railway operators. All operators provided details of tonnes carried and most provided details of tonne-kilometres performed. In a few cases, the tonne-kilometre figures have been estimated by the BTCE using the advised average length of haul.

TRAFFIC TASK PERFORMED BY AUSTRALIAN NON-GOVERNMENT RAILWAYS

Year	*Iron ore railways*	*Sugar tramways*	*Coal railways(a)*	*Other non-government railways*	*Total(a)*
	TONNES CARRIED (million)				
1982–83	78.2	20.9	7.1	8.0	114.1
1983–84	71.5	21.6	7.0	10.9	111.0
1984–85	86.9	24.0	7.9	11.1	129.9
1985–86	86.8	21.6	8.1	10.3	126.8
1986–87	91.1	23.1	7.8	11.1	133.1
1987–88	94.6	23.6	8.5	10.7	137.3
	TONNE-KILOMETRES (million)				
1982–83	24,432	355	86	171	25,045
1983–84	22,646	366	85	226	23,324
1984–85	27,649	408	98	223	28,378
1985–86	28,517	368	116	201	29,202
1986–87	29,552	393	116	220	30,281
1987–88	30,218	425	126	230	30,998

(a) Includes transfers to and from government railways.

TRAM, BUS, AND FERRY SERVICES

Trams

At 30 June 1989, tram services were in operation in Melbourne and in Adelaide. Regular tram services ceased to operate in Ballarat on 19 September 1971 and in Bendigo on 16 April 1972. However, services are operated in both cities, on an irregular basis, but generally during holiday periods, as a tourist attraction.

In many parts of Australia, private lines used for special purposes in connection with the timber, mining, sugar, or other industries are often called tramways, but they are more properly railways, and the traffic on them has nothing in common with that of the street tram used for the conveyance of passengers.

Buses

Services are operated by government or municipal authorities and private operators. Statistics are collected for government and municipal bus services which are located in all capital cities and Newcastle, New South Wales; Rockhampton, Queensland; Launceston and Burnie, Tasmania; and for country road services operated by the Victorian Railways, the State Rail Authority of New South Wales, the Western Australian Government Railways, and the Australian National Railways.

Ferries

Ferry passenger services are operated in the following States: New South Wales, at Sydney, Newcastle and various other waterways; Western Australia, on the Swan River at Perth; Tasmania, on the Mersey River at Devonport and on the Derwent River at Hobart; and Queensland, on the Brisbane River at Brisbane. Control is exercised by both government authorities and private operators.

Government and municipal tram and bus services

Since the development in recent years of the various forms of public road transport under the control of single authorities and the gradual replacement of tram services by bus services, it is not possible to obtain separate statistics for all phases of the activities of each form of transport, particularly financial operations.

TRAM AND BUS SERVICES: GOVERNMENT AND MUNICIPAL, STATES AND TERRITORIES, 1988–89

	NSW	*Vic.(a)*	*Qld*	*SA*	*WA(b)*	*Tas.*	*NT*	*ACT*	*Aust.*
Route-kilometres at 30 June									
Tram (kilometres)	..	340	..	11	..	..	..	..	351
Bus (kilometres)	1,237	3,175	831	1,020	7,608	500	626	1,220	16,217
Vehicle-kilometres									
Tram ('000)	..	24,220	..	751	..	..	..	..	24,971
Bus ('000)	68,650	37,990	29,955	37,753	49,651	9,689	2,629	18,038	254,355
Rolling stock at 30 June									
Tram (number)	..	630	..	21	..	..	..	..	651
Bus (number)	1,564	1,396	620	701	922	255	46	446	5,950
Passenger journeys									
Tram ('000)	..	118,900	..	2,544	..	..	..	..	121,444
Bus ('000)	199,341	93,000	48,926	58,456	54,981	12,783	2,889	24,100	494,476
Gross revenue(c)									
Tram and bus ($'000)	223,510	96,700	46,205	53,757	68,449	9,023	2,281	20,730	520,655
Working expenses(d)									
Tram and bus ($'000)	301,346	264,500	77,728	126,000	n.a.	24,575	6,758	38,997	n.a.
Net revenue									
Tram and bus ($'000)	–77,836	–167,800	–31,523	–72,243	n.a.	–15,552	–4,477	–18,267	n.a.
Employees at 30 June									
Tram and bus (number)	5,995	n.a.	1,597	*n.a.*	2,164	547	104	1,071	n.a.

(a) Metropolitan area only. *(b)* Excludes operations of Eastern Goldfields Transport Board. *(c)* Excludes government grants. *(d)* Includes provision of reserves for depreciation, etc. where possible.

TRAM AND BUS SERVICES: GOVERNMENT AND MUNICIPAL

	1983–84	*1984–85(a)*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
Route-kilometres at 30 June						
Tram (kilometres)	n.a.	340	340	343	343	351
Bus (kilometres)	n.a.	n.a.	n.a.	n.a.	n.a.	16,217
Vehicle kilometres						
Tram ('000)	n.a.	24,747	24,778	24,863	24,621	24,971
Bus ('000)	n.a.	252,038	255,753	266,516	*(b)*214,687	*(b)*254,355
Rolling stock at 30 June						
Tram (number)	n.a.	683	663	648	641	651
Bus (number)	n.a.	5,942	5,918	5,939	5,962	5,950
Passenger journeys						
Tram ('000)	n.a.	112,071	115,111	115,758	117,876	121,444
Bus ('000)	n.a.	454,460	460,281	463,670	*(b)*387,601	*(b)*494,476

(a) Excludes operations of Eastern Goldfields Transport Board in Western Australia. *(b)* Excludes details of metropolitan tram and bus services in South Australia.

MOTOR VEHICLES

Tables in this section include vehicles owned by private individuals, local government authorities, State Governments, and the Commonwealth Government (excluding those belonging to the defence services).

Survey of Motor Vehicle Usage

The triennial Survey of Motor Vehicle Usage (SMVU) is undertaken by the ABS in response to a wide range of users' needs to monitor the details for motor vehicle usage within Australia. Details obtained determine the total distance travelled by vehicles

classified according to area of operations and purpose of travel. Information is also obtained on tonne-kilometres, average load carried, vehicle usage (i.e. business or private), fuel consumption, driver characteristics, bus passengers carried and other important variables.

The statistics are used for many decisions regarding the monitoring, planning and policy issues that affect all Australian motorists.

The 1988 SMVU consisted of some 67,000 vehicles (including for the first time since 1979 details pertaining to buses) selected from State/Territory motor registry files. Final results from this survey were released in April 1990.

The following table, taken from the 1988 SMVU publication, shows that motor vehicles in Australia travelled a total of 153,915 million kilometres. Cars and station wagons travelled 116,640 million kilometres. Of this 21 per cent was for business purposes, a further 26 per cent for travel to and from work and 53 per cent for private purposes. Rigid trucks travelled a total of 7,840 million kilometres, while articulated trucks travelled 3,836 million kilometres in total.

The standard errors (SE %) indicate the extent to which the estimates can vary by chance because only a sample and not the total vehicle population was enumerated.

TOTAL ANNUAL KILOMETRES BY VEHICLE TYPE AND PURPOSE OF TRAVEL AUSTRALIA, TWELVE MONTHS ENDED 30 SEPTEMBER 1988

	Laden business		*Unladen business*		*Total business(a)*		*To and from work paid and unpaid*		*Private*		*Total*	
Type of vehicle	*Million kilometres*	*SE %*	*Million kilometres*	*SE %*	*Million kilometres*	*SE %*	*Million kilometres*	*SE %*	*Million kilometres*	*SE %*	*Million kilometres*	*SE %*
Cars and station wagons	..	..	..	..	24,761.9	2	29,743.4	2	62,134.5	1	116,639.8	1
Motor cycles	..	..	..	..	195.2	10	696.5	4	1,032.3	5	1,924.0	3
Utilities and panel vans	9,834.0	3	3,284.7	4	13,333.6	3	3,470.9	4	5,177.1	4	21,981.6	2
Rigid trucks	5,441.5	2	1,857.6	3	7,299.1	2	280.6	7	260.3	8	7,839.9	2
Articulated trucks	2,892.4	1	932.2	1	3,824.6	1	10.0	8	1.2	15	3,835.7	1
Non freight-carrying trucks	..	..	..	..	237.1	5	13.9	69	10.1	48	261.1	7
Buses	..	..	..	..	1,409.2	3	7.7	18	15.9	28	1,432.8	3
Total	**18,167.9**	**2**	**6,074.5**	**3**	**51,060.5**	**1**	**34,223.0**	**2**	**68,631.4**	**1**	**153,914.9**	**1**

(a) Includes the total kilometres travelled for business purposes of cars, station wagons, motor cycles and utilities and panel vans predominantly used for private purposes. The dissection of business travel into laden/unladen was not sought for these vehicles.

The following table relates the State or Territory of vehicle registrations to the area vehicles actually operated in. For vehicles registered in New South Wales, 86 per cent of the tonne-kilometres travelled were within the State, whereas for the Australian Capital Territory, 62 per cent was for interstate travel.

TOTAL ANNUAL TONNE-KILOMETRES(a) BY AREA OF OPERATION: STATE/TERRITORY OF REGISTRATION, TWELVE MONTHS ENDED 30 SEPTEMBER 1988

	Area of operation											
	Capital city(b)		*Provincial urban*		*Other areas of State or Territory*		*Total within State of registration*		*Interstate*		*Australia*	
State of registration	*Million tonne-km*	*SE %*	*Million tonne-km*	*SE %*	*Million tonne-km*	*SE %*	*Million tonne-km*	*SE %*	*Million tonne-km*	*SE %*	*Million tonne-km*	*SE %*
New South Wales	7,741.4	5	3,194.9	4	10,546.9	2	21,483.2	3	3,443.7	3	24,926.9	2
Victoria	6,927.9	4	1,677.1	7	8,089.4	4	16,694.5	2	6,190.3	4	22,884.8	2
Queensland	2,797.7	3	2,631.3	4	4,750.7	3	10,179.7	2	3,154.0	4	13,333.8	2
South Australia	1,631.4	5	..	..	3,725.4	5	5,356.8	3	3,056.3	5	8,413.0	3
Western Australia	2,504.7	4	..	..	7,120.9	8	9,625.7	6	536.4	13	10,162.1	6
Tasmania	490.1	10	914.1	6	1,078.3	8	2,482.5	4	40.4	44	2,522.8	4
Northern Territory	262.6	21	..	..	1,727.9	7	1,990.5	6	696.6	15	2,687.0	6
Australian Capital Territory	226.0	7	..	..	..	..	226.0	7	372.3	6	598.3	5
Australia	**22,581.9**	**2**	**8,417.4**	**3**	**37,039.6**	**2**	**68,038.8**	**1**	**17,490.1**	**2**	**85,528.8**	**1**

(a) Total annual tonne-kilometres is the product of reported average load and total business kilometres travelled while laden, for each vehicle. *(b)* Includes all of ACT for ACT registered vehicles.

Motor vehicles on register

Censuses of motor vehicles have been conducted in respect of 31 December 1955 and 1962, and 30 September 1971, 1976, 1979, 1982, 1985 and 1988. At these census dates, considerably more information concerning the particulars shown in the tables following is available. Summary details of motor vehicles on the register are compiled as at 30 June each year from information made available by the various motor vehicle registration authorities in the States and Territories. Figures from the censuses differ from the corresponding year's figures compiled for the annual vehicles on register series. These inconsistencies result from different dates of recording and because, for some States and Territories, the annual figures include vehicles where the registration has lapsed but the details have not been removed from the register, whereas the census excludes such vehicles.

MOTOR VEHICLE CENSUS: 30 SEPTEMBER 1988
('000)

			Trucks					
State or Territory	*Motor cars and station wagons*	*Utilities and panel vans*	*Rigid*	*Articulated*	*Non-freight-carrying*	*Buses*	*Motor cycles*	*Total (a)*
New South Wales	2,258.7	390.0	171.8	14.9	14.2	54.1	89.9	2,993.6
Victoria	2,042.8	196.0	205.1	13.7	13.4	14.3	70.8	2,556.0
Queensland	1,131.1	297.7	53.8	8.4	5.4	10.5	60.4	1,567.2
South Australia	681.5	90.0	48.7	4.1	7.4	3.0	34.4	869.1
Western Australia	679.1	136.7	74.5	5.1	8.7	7.5	35.4	947.0
Tasmania	211.0	43.2	17.1	1.6	3.2	1.9	6.4	284.3
Northern Territory	35.7	18.2	1.7	1.0	0.3	0.7	3.1	60.7
Australian Capital Territory	118.9	11.7	3.7	0.3	0.7	1.2	3.7	140.2
Australia	**7,158.8**	**1,183.5**	**576.3**	**48.9**	**53.4**	**93.2**	**304.0**	**9,418.0**

(a) Excludes tractors, plant and equipment, caravans and trailers.

MOTOR VEHICLES ON REGISTER, BY TYPE OF VEHICLE, AUSTRALIA ('000)

30 June	Motor cars and station wagons	Utilities, trucks, panel vans, other truck type vehicles and buses	Total (excludes motor cycles)	Motor cycles
1984	6,636.2	1,798.4	8,434.4	398.4
1985	6,842.5	1,886.5	8,729.1	389.2
1986	6,985.4	1,930.6	8,916.0	374.5
1987	7,072.8	1,949.8	9,022.7	351.0
1988	7,243.6	1,977.6	9,221.1	323.3
1989	7,442.2	2,047.3	9,489.5	316.6

MOTOR VEHICLES(a) ON REGISTER PER 1,000 OF POPULATION STATES AND TERRITORIES

30 June	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
1984	509.3	554.1	574.2	555.8	574.0	571.1	453.9	486.1	542.2
1985	520.7	571.1	573.7	572.0	589.4	588.0	467.4	488.8	553.9
1986	526.0	575.1	574.3	582.5	590.7	596.8	478.1	483.2	558.2
1987	522.3	581.0	562.6	575.5	582.0	598.1	459.7	497.3	555.3
1988	523.8	589.8	568.0	580.3	587.4	607.2	440.5	498.5	559.9
1989	532.7	583.3	574.9	584.9	597.0	617.0	465.8	512.3	564.6

(a) Excludes motor cycles, tractors, plant and equipment, caravans and trailers.

Drivers' and riders' licences

At 30 June 1990, the numbers of licences in force to drive motor vehicles or ride motor cycles respectively were: New South Wales—3,946,357 and 323,578; Victoria—2,725,835 and 149,454; Queensland—1,781,988 and 332,224; Western Australia—952,022 and 132,197; South Australia—908,479 and 144,198; Tasmania—281,355 (including 34,203 combined motor vehicle and motor cycle licences) and 214; Northern Territory—92,387 and 19,734; Australian Capital Territory—182,403 (including 21,205 combined motor vehicle and motor cycle, and motor cycle only licences).

Registrations of new motor vehicles

Particulars of registrations of new motor vehicles are shown by type of vehicle in preliminary monthly publications, and by type and make of vehicle in monthly and annual publications of motor vehicle registrations.

In these statistics, 'registrations' means registrations processed by the motor vehicle registration authorities in the States and Territories during the period.

REGISTRATIONS OF NEW MOTOR VEHICLES, BY TYPE OF VEHICLE, 1988–89

State or Territory	Motor cars and station wagons	Utilities	Trucks: Panel vans	Trucks: Rigid	Trucks: Articulated	Other truck type vehicles (a)	Buses	Total (excludes motor cycles)	Motor cycles
NSW	156,467	13,357	18,296	12,561	1,259	519	4,113	206,572	6,081
Vic.	119,216	6,717	1,171	12,320	930	426	714	141,494	4,219
Qld	74,731	13,807	3,318	3,070	706	304	729	96,665	3,922
SA	31,920	2,649	1,462	2,017	277	247	164	38,736	1,364
WA	44,100	4,578	2,798	5,766	256	95	656	58,249	2,522
Tas.	10,009	1,385	471	802	103	47	98	12,915	369
NT	3,511	1,246	181	114	116	24	101	5,293	415
ACT	7,957	521	373	323	21	6	96	9,297	184
Australia	**447,911**	**44,260**	**28,070**	**36,973**	**3,668**	**1,668**	**6,671**	**569,221**	**19,076**

(a) Non-freight carrying vehicles. *(b)* From August 1983 in NSW, the body-type classification applied by the registration authority for small bus-type vehicles changed from panel vans to buses.

REGISTRATIONS OF NEW MOTOR VEHICLES, BY TYPE OF VEHICLE

Year	Motor cars and station wagons	Utilities	Trucks: Panel vans	Trucks: Rigid	Trucks: Articulated	Other truck type vehicles (a)	Buses	Total (excludes motor cycles)	Motor cycles
1983–84	461,018	46,140	(b)46,779	33,397	2,581	1,630	(b)12,169	603,714	46,684
1984–85	510,893	54,507	45,582	44,422	3,627	1,952	13,847	674,830	45,879
1985–86	476,488	46,499	33,138	39,033	4,029	2,159	10,868	612,214	35,906
1986–87	376,080	32,485	20,143	28,693	3,149	1,664	6,587	468,801	23,199
1987–88	384,204	29,820	18,295	28,592	2,812	1,602	5,495	470,820	18,532
1988–89	447,911	44,260	28,070	36,973	3,668	1,668	6,671	569,221	19,076

(a) Non-freight carrying vehicles. *(b)* From August 1983 in NSW, the body–type classification applied by the registration authority for small bus–type vehicles changed from panel vans to buses.

Road Traffic Accidents

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a) (ADMISSIONS TO HOSPITALS): NUMBER OF ACCIDENTS, PERSONS KILLED OR INJURED, 1988

State or Territory	Number of accidents	Persons killed	Persons injured	Per 100,000 of mean population: Number of accidents	Per 100,000 of mean population: Persons killed	Per 100,000 of mean population: Persons injured	Per 10,000 motor vehicles registered(b): Number of accidents	Per 10,000 motor vehicles registered(b): Persons killed	Per 10,000 motor vehicles registered(b): Persons injured
NSW	7,781	1,037	8,668	136.5	18.2	152.0	25.3	3.4	28.1
Vic.	8,427	701	10,333	197.7	16.4	242.4	32.7	2.7	40.1
Qld	3,699	539	4,255	134.8	19.6	155.0	22.9	3.3	26.3
SA	2,140	223	2,590	151.9	15.8	183.9	25.3	2.6	30.6
WA	2,209	230	2,590	143.0	14.9	167.6	23.6	2.5	27.7
Tas.	595	75	649	132.7	16.7	144.7	21.4	2.7	23.3
NT	366	51	428	234.3	32.7	274.0	50.5	7.0	59.0
ACT	187	31	192	68.4	11.3	70.3	13.4	2.2	13.8
Australia	**25,404**	**2,887**	**29,705**	**153.6**	**17.5**	**179.6**	**26.6**	**3.0**	**31.1**

(a) Accidents reported to the police or other relevant authority which occurred in public thoroughfares and which resulted in death within thirty days or personal injury to the extent that the injured person was admitted to hospital. *(b)* Number of motor vehicles (excluding tractors, plant and equipment) on register at 30 June 1988.

ROAD TRAFFIC ACCIDENTS INVOLVING FATALITIES

Year	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Aust.
ACCIDENTS INVOLVING FATALITIES									
1984	910	584	448	205	203	77	45	35	2,507
1985	954	605	452	239	219	69	59	30	2,627
1986	908	610	421	259	208	78	63	30	2,577
1987	858	626	400	230	193	67	80	33	2,487
1988	912	615	483	204	199	68	46	32	2,559
1989p	783	678	376	199	213	68	57	28	2,402
PERSONS KILLED									
1984	1,037	657	505	232	220	83	50	37	2,821
1985	1,067	683	502	268	243	78	67	33	2,941
1986	1,029	668	481	288	228	91	71	32	2,888
1987	959	705	442	256	213	77	84	36	2,772
1988	1,037	701	539	222	229	75	51	32	2,886
1989p	960	771	428	219	242	80	61	34	2,795

ROADS

Summary of roads used for general traffic

Proclaimed or declared roads

The following table is a summary of the roads proclaimed or declared under the Acts of the several States relative to the operations of the central road authorities, and shows the lengths of various classes proclaimed or declared as at 30 June 1988. The central road authority in each State assumes responsibility under the Act for the whole or a proportion of the cost of construction and maintenance of these roads, the extent varying from State to State and with the class and locality of the roads. Before proclamation of a main road, consideration is given, in general, to the following points: availability of funds; whether the road is, or will be, within one of several classes of main trunk routes; the value of the roads as connecting links between centres of population or business; whether the district is, or will be, sufficiently served by railways. Provision is also made in some States for the declaration of roads other than main roads. The absence of a particular class in any State does not necessarily imply that there are no roads within that State that might be so classified; the classes are restricted only to roads proclaimed or declared under the Acts. A further point to make is that, through various causes (e.g. insufficiency of funds, labour or materials), construction or maintenance may not keep pace with gazettal of roads, and, therefore, the condition of a road may not match its status.

PROCLAIMED OR DECLARED ROADS: LENGTHS, STATES, 30 JUNE 1988
(kilometres)

Class of road	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*Aust.*
State highways and freeways	10,397	7,537	10,417	—	7,949	1,919	38,219
Trunk roads		—	225	12,449	—	—	n.a.
Ordinary main roads	*(a)*25,124	14,793	8,224	—	7,460	1,259	n.a.
Total main roads	*35,521*	*22,330*	*18,866*	*12,449*	*15,409*	*3,178*	*107,753*
Secondary roads	n.a.	n.a.	6,373	—	8,645	296	n.a.
Development roads	n.a.	n.a.	8,712	—	—	45	n.a.
Tourist roads	n.a.	n.a.	—	—	—	211	n.a.
Other roads	n.a.	n.a.	—	—	—	—	n.a.
Total other roads	*n.a.*	*n.a.*	*15,085*	—	*8,645*	*552*	*n.a.*
Total	**n.a.**	**n.a.**	**33,951**	**12,449**	**24,054**	**3,730**	**n.a.**

(a) A combination of trunk and ordinary main roads.

Total roads

The following table represents an attempt to classify all the roads open for general traffic in Australia, at the latest dates available, according to States and Territories and to certain broad surface groups. The figures in the table for the States are obtained from the Deputy Commonwealth Statistician in each State, and are derived mainly from local government sources.

ALL ROADS OPEN FOR GENERAL TRAFFIC LENGTHS, STATES AND TERRITORIES, 30 JUNE 1989
(kilometres)

Surface of roads	*NSW(a)*	*Vic.(b)*	*Qld*	*SA*	*WA(c)*	*Tas.(d)*	*NT(e)*	*ACT*	*Aust.*
Bitumen or concrete	77,803	68,408	57,652	23,712	41,585	9,416	5,681	2,445	286,702
Gravel, crushed stone or other improved surface	64,572	48,287	45,187	—	40,635	13,121	5,960	170	217,932
Formed only	32,438	23,580	51,356	71,100	40,159	271	4,605	—	223,509
Cleared only	20,616	21,009	16,637	—	19,539	176	4,144	—	82,121
Total	**195,429**	**161,284**	**170,832**	**94,812**	**141,918**	**22,984**	**20,390**	**2,615**	**810,264**

(a) Excludes roads designated but not trafficable. Excludes Lord Howe Island and the unincorporated area of the Western Division. *(b)* Excludes roads coming under the responsibility of the State Electricity Commission and Forests Commission. *(c)* Excludes Forests Department roads. *(d)* Forestry roads have been reclassified from cleared only to gravel. *(e)* Excludes roads in towns and Local Government Areas.

AUSTROADS

AUSTROADS, the national association of State, Territory and Commonwealth road and traffic authorities, was established in July 1989 to replace the National Association of Australian State Road Authorities (NAASRA) which was established in 1934.

The present members of AUSTROADS are: the Roads and Traffic Authority, New South Wales; Vic Roads, Victoria; Department of Transport, Queensland; Main Roads Department, Western Australia; Department of Road Transport, South Australia; Department of Roads and Transport, Tasmania; Department of Transport and Works, Northern Territory; Australian Capital Territory Administration; and the Commonwealth Department of Transport and Communications.

AUSTROADS' mission is 'to pursue the effective management and use of the nation's roads as part of the Australian transport system, by the development and promotion of national policies and practices'.

AUSTROADS maintains a national perspective and provides strategic direction for the development, management and use of Australia's road system, involving consultation and discussion with peak bodies that have a stake in the road industry. It provides a forum which enables a national approach to the effective development and management of the Australian road system. This results in the coordination of road research, preparation of road and bridge design standards, improvements in and harmonisation of operating practices and reporting on the current status of the road network.

The operating structure is based on four programs:

- **Road and Road Transport Policy**—develops policy proposals addressing national road issues, e.g. major road issues, intermodal issues, environment, national social and economic developmental role of roads in land transport policy;
- **Road Use Management**—contributes to the safe and efficient use of roads, e.g. registration and licensing, road safety, traffic management, and freight industry policy;
- **Business Efficiency**—improves efficiency and effectiveness in the management and development of roads, e.g. management of assets, human resources quality, contracts, information and projects, performance measurement, investment appraisal, resource allocation; and
- **Road Technology**—develops and promotes national road technology policy and, in a joint arrangement with the Australian Road Research Board, promotes the development and application of the most appropriate and efficient road technology within the Australian road industry, e.g. through identification and support for R&D, technology transfer, standards development, harmonisation of practices, and international cooperation.

These programs are outcome orientated and are regularly evaluated to determine how effectively they meet the objectives of AUSTROADS.

The National Office arranges publication of policies and standards which are widely used by road authorities, local government, consultants and universities.

AUSTROADS cooperates with Standards Australia on the preparation of national standards, provides direction for road research, including research by the Australian Road Research Board and is a member of the Permanent International Association of Road Congress (PIARC) and of the Road Engineering Association of Asia and Australasia (REAAA).

Australian Road Research Board—ARRB

The Australian Road Research Board is a non profit-making company founded in 1960 by NAASRA, and is located at Vermont in Victoria. It is financed mainly by Commonwealth and State Government Road Authorities whose permanent heads, along with a representative of the Australian Council of Local Government Associations, make up ARRB's Board of Directors. The Executive Director, a full-time employee and member of the Board, is responsible for administering the Director's policies.

The ARRB regularly undertakes and sponsors road and road transport research over a comprehensive range of subjects and disseminates results to appropriate organisations, engineers and scientists involved in the design, location, construction, upkeep and use of roads.

The ARRB disseminates road research information through its major biennial conferences and regular symposia, seminars and workshops and through its publications which include the ARRB Conference Proceedings, a quarterly journal *Australian Road Research*, symposium and workshop papers and various reports and technical manuals arising out of its many research projects. ARRB also maintains a unique library of road literature and operates a computer-based information service which abstracts and indexes road-related literature and research in progress. In 1987, the Information on Roads (INROADS) database was made publicly accessible on CSIRO's AUSTRALIS system. The INROADS database lists all ARRB publications from 1960, significant Australian road-related literature from 1977, publications catalogued for the ARRB Library, including some retrospective conversion of a card catalogue from 1984, and an annual update of current research in progress. INROADS supersedes the ARRB and ROAD databases.

The ARRB acts as the Australian member of the Organisation for Economic Co-operation and Development's International Road Research Documentation (IRRD) system, contributing information on Australian literature and projects. IRRD information from all member countries is available to Australians through ARRB's computer search services. ARRB also maintains close contacts with road research organisations in other countries.

AIR TRANSPORT

The Commonwealth imposes safety and operational controls on the Australian aviation industry under the *Civil Aviation Act 1988* and the Civil Aviation Regulations. Under this legislation, a central Commonwealth agency, the Civil Aviation Authority, was established with effect from 1 July 1988 and vested with sole responsibility for the administration and enforcement of aviation safety within Australia. The Bureau of Air Safety Investigation which is directly responsible to the Minister and performs a safety audit function, remains within the Department of Transport and Communications.

In addition, the Commonwealth through the Department of Transport and Communications has oversight of such matters as the import and export of aircraft, the negotiation of international air transport agreements, the approval of international fares and freight rates, and the operation of scheduled passenger air services across State or Territory boundaries. Fares charged for the carriage of passengers on domestic scheduled air services are required to be approved by a Commonwealth statutory body, the Independent Air Fares Committee.

International activity

International organisations

Australia is one of the 163 (as at 30 June 1990) members of the International Civil Aviation Organisation (ICAO). Australia has continued its membership of the (governing) Council since ICAO was established in 1947. Australia is also represented on the 15 member Air Navigation Commission which is responsible for drawing up international standards and procedures for the safety, regularity and efficiency of air navigation. In addition, Australia participates in the Commonwealth Air Transport Council, the South Pacific Regional Civil Aviation Council, the Airport Operators Council International and the International Civil Airports Association.

International agreements

Australia as at 30 June 1990 has air service agreements with 28 countries. These agreements have full treaty status. Australia also has 10 air service arrangements, with less than treaty status, as of 30 June 1990 and two of these, Argentina and Switzerland, will be upgraded to treaty status when draft agreements are ratified. Under these agreements and arrangements, Qantas, Australia's designated airline, and the foreign carriers of Australia's bilateral partners are entitled to operate services to and/or through each others territories. Australia also has an agreement with the USSR relating principally to over-flight rights and charter services.

International scheduled services

At 30 June 1990, 38 international airlines were operating regular scheduled air services to and from Australia. The carriers (and contracting states) were:

Aerolineas Argentinas	(Argentina)
Air Caledonie International	(France)
Air China International	(People's Republic of China)
Air India	(India)
Air Nauru	(Nauru)
Air New Zealand	(New Zealand)
Air Niugini	(Papua New Guinea)
Air Pacific	(Fiji)
Air Vanuatu	(Vanuatu)
Alitalia	(Italy)
All Nippon Airways	(Japan)
American Airlines	(USA)
British Airways	(UK)
Canadian Airlines International	(Canada)
Cathay Pacific Airways	(UK)
Continental Airlines	(USA)
Federal Express	(USA)
Garuda Indonesian Airways	(Indonesia)
Hawaiian Airlines	(USA)
Japan Airlines	(Japan)
JAT Yugoslav Airlines	(Yugoslavia)
KLM Royal Dutch Airlines	(Netherlands)
Korean Air	(Korea)
Lauda Air	(Austria)
Lufthansa German Airlines	(Germany)
Malaysia Airlines System	(Malaysia)
Merpati Nusantara Airlines	(Indonesia)
Olympic Airways	(Greece)
Philippine Airlines	(Philippines)
Polynesian Airlines	(Western Samoa)
Qantas	(Australia)
Royal Brunei Airlines	(Brunei)
Singapore Airlines Ltd	(Singapore)
Thai Airways International	(Thailand)
United Airlines	(USA)
Union de Transport Aeriens	(France)

Polynesian Airlines Ltd also operates services on behalf of Cook Islands International (Cook Islands) and Air Pacific operates services on behalf of Solomon Islands Airlines (Solomon Islands) and Qantas.

Qantas, Australia's international airline, operated a fleet of 30 Boeing 747 and 12 Boeing 767 jet aircraft. All shares in Qantas Airways Limited are owned by the Commonwealth Government.

International non-scheduled services

Australia's passenger and freight charter policies encourage in-bound tourism and freight carriage particularly over routes not served by the scheduled carriers.

International traffic

The following table shows particulars of scheduled international airline traffic during 1988–89 moving into and out of an area which embraces Australia and Norfolk Island. These figures do not include traffic between Australia and Norfolk Island.

AIR TRANSPORT: SCHEDULED INTERNATIONAL AIRLINE TRAFFIC TO AND FROM AUSTRALIA(a) 1988–89

Type of traffic	*Number of flights(b)(c)*	*Passengers*	*Freight tonnes*	*Mail tonnes*
Traffic to Australia—				
Qantas Airways Limited	7,870	1,659,227	58,426	1,226
Other airlines	11,699	2,358,377	106,658	7,253
All airlines	**19,569**	**4,017,604**	**165,084**	**8,479**
Traffic from Australia—				
Qantas Airways Limited	7,866	1,619,230	54,460	4,733
Other airlines	11,437	2,287,316	104,800	2,014
All airlines	**19,303**	**3,906,546**	**159,260**	**6,747**

(a) Australia and Norfolk Island. *(b)* Includes Qantas flights using aircraft leased from other airlines. *(c)* Difference between in/out numbers arises because some outward flights are operated as non-scheduled, and thus not counted in above tables.

Statistics covering the operations of Australia's regular overseas services are shown in the following table. These operations include all stages of Qantas flights linking Australia with overseas countries.

AIR TRANSPORT: OPERATIONS OF AUSTRALIA'S SCHEDULED OVERSEAS SERVICES

		1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89*
Hours flown	number	83,551	89,952	100,653	117,383	126,851	140,135
Kilometres flown	'000	65,670	71,046	79,050	91,874	98,999	109,102
Passengers—							
Embarkations	number	2,189,669	2,449,596	2,671,486	3,052,411	3,612,197	3,947,544
Passenger-kilometres	'000	15,247,801	16,858,595	18,233,088	21,258,519	24,535,745	26,516,771
Freight—							
Tonnes uplifted	tonnes	84,844	90,357	91,961	110,389	119,202	130,635
Tonne-kilometres	'000	563,268	637,590	691,352	811,627	855,260	929,458
Mail—							
Tonnes uplifted	tonnes	4,410	4,744	4,869	5,327	5,858	5,988
Tonne-kilometres	'000	40,324	43,231	45,370	51,819	57,946	61,049

AIR CARGO BY TRADE AREA, INWARD AND OUTWARD OVERSEAS, 1986–87

	Inward cargo		*Outward cargo*	
Trade area	*Gross weight*	*Value*	*Gross weight*	*Value*
	tonnes	$'000	tonnes	$'000
Europe	28,347	2,569,358	7,227	1,053,645
East Asia	9,224	350,016	17,620	767,140
Japan and North Asia	7,617	752,369	15,274	944,632
North America—East Coast	15,034	1,549,266	2,621	273,096
North America—West Coast	11,120	1,393,284	13,054	525,425
Central America and Carribbean	60	9,990	89	3,322
South America—East Coast	633	54,483	30	4,153
South America—West Coast	48	3,298	41	1,817
Africa—Mediterranean	—	8	5	521
West Africa	44	8,447	36	423
South and East Africa	483	317,398	459	17,828
Red Sea and Mediterranean Middle East	175	32,689	985	11,811
Middle East Gulf	22	13,118	17,855	62,409
West India	797	39,902	539	9,787
East India	1,384	37,968	176	31,359
South-East Asia	4,506	306,146	30,101	396,067
New Zealand	21,942	460,271	29,721	645,072
Papua New Guinea and Solomon Islands	264	124,854	2,868	85,118
Pacific Islands and other countries	952	29,276	5,210	62,579
Trade area not specified	16	2,762	8,421	203,882
Total	**102,668**	**8,054,903**	**152,332**	**5,100,086**

The air cargo statistics set out in the above table have been compiled from information contained in import and export documents submitted by importers and exporters, or their agents to the Australian Customs Service as required by the *Customs Act 1901*.

Domestic activity

Economic regulation and deregulation

The Commonwealth Government has announced its intention to deregulate domestic aviation in Australia and to open the nation's interstate air services to free competition, effective from 31 October 1990.

The Commonwealth's regulation on economic grounds of domestic interstate air transport has been conducted through arrangements commonly known as the 'two-airline policy'. Under the policy, the operation of regular passenger air services over the main domestic or 'trunk' routes has been restricted generally to the Commonwealth-owned Australian Airlines Ltd and the privately-owned Ansett Airlines of Australia.

The Commonwealth has maintained the policy essentially by using the Customs (Prohibited Imports) Regulations to restrict operators' access to aircraft which could then be used to compete with Australian Airlines or Ansett over the trunk routes. Since 1981, the policy has also been based on the following Commonwealth legislation: the *Airlines Agreement Act 1981*, the *Airlines Equipment Amendment Act 1981* and the *Independent Air Fares Committee Act 1981*.

Effective from 31 October 1990, the Government will withdraw from detailed economic regulation of domestic air fare setting, aircraft imports, capacity controls and route entry, and the above Commonwealth legislation will be repealed. Commonwealth regulation will be replaced by an environment where new entrant airlines will be allowed access to interstate trunk routes, and airlines in general will be free to make their own decisions concerning air fares and capacity on interstate routes.

Customers' interests will be maintained through the application of the Trade Practices Act and scrutiny of the Prices Surveillance Authority which apply to industry generally.

Major airlines

The major airlines providing domestic air services in Australia are the Ansett group, comprising Ansett Airlines of Australia, Air NSW, Ansett WA and Ansett NT; East–West Airlines; Australian Airlines; and IPEC Pty Ltd, a cargo operator. TNT and News Ltd jointly own both the Ansett group and East–West.

At 30 June 1990, the Ansett group's fleet consisted of eight Airbus A320s, five Boeing 767-200s, six Boeing 727-200s, 12 Boeing 737-300s, five Fokker F28-1000s, one Fokker F28-4000, and seven Fokker F50s.

Australian Airlines operated a fleet of four Airbus A300s, one Boeing 727-100, 10 Boeing 727-200s, and 15 Boeing 737-300s.

East–West Airlines operated a fleet of two Fokker F28-3000s and five Fokker F28-4000s.

The Interstate Parcel Express Company Australia Pty Ltd, trading as IPEC Aviation, operates cargo airline services using two DC9 aircraft.

Commuter services

Some 45 commuter operators provided regular public transport air services to approximately 250 ports in Australia at 30 June 1989.

The aircraft types currently used by commuter operators are predominantly in the 6–9 seat category, such as the Piper PA31 and Cessna 310, 402 and 404 series. Larger types used include Twin Otter, Beech King Air, Metroliner, Embraer Bandeirante, British Aerospace Jetstream 31 and Shorts 330 and 360. During 1988, commuter operators carried an estimated 1.3 million passengers.

General aviation

In addition to scheduled services, there is a wide range of other activities undertaken by the aviation industry, including business flying, aerial work, aerial agriculture, charter, training and private flying. Hours flown by general aviation during 1987–88 were estimated at 1.7 million. Charter operation made up 21.8 per cent of general aviation hours flown in 1987–88, the highest proportion of any activity. Charter operations involve the use of aircraft in operations for the carriage of passengers and cargo for hire or reward which are not scheduled or available to the public. Approximately 650 operators in Australia hold charter licences.

Scheduled domestic airline services

Statistics of all regular domestic airline services are set out in the following table.

AVIATION INDUSTRY ACTIVITY HIGHLIGHTS AUSTRALIA

Domestic airlines	*1985–86*	*1986–87*	*1987–88*	*1988–89*	*1989–90p*
Domestic Airlines—					
Passengers (thousands)	12,099.8	12,506.7	13,647.9	14,012.1	9,878.0
Passenger kilometres performed (millions)	11,293.4	12,046.6	13,267.2	13,732.7	9,954.3
Revenue passenger load factor (per cent)	72.6	72.1	75.2	76.4	72.4
Cargo tonnes (thousands)*(a)*	168.5	154.3	164.1	169.1	99.4
Cargo tonnes kilometres (millions)*(a)*	156.8	146.6	157.1	161.4	95.8
Total tonnes kilometres (millions)	1,173.2	1,230.8	1,351.2	1,397.4	991.6
Revenue weight load factor (per cent)	64.2	61.6	63.1	63.7	61.0
Hours flown (thousands)	264.1	276.7	285.3	290.3	186.8
Aircraft movements (thousands)	432.2	433.8	429.8	420.0	272.0
Commuter airlines—					
Passenger (thousands)	1,101.6	1,169.2	1,224.7	p1,324.1	n.a.
Cargo tonnes (thousands)*(a)*	3.7	3.7	3.9	n.a.	n.a.

(a) Includes freight and mail.

Airport activity—domestic passengers

The statistics set out in the next table have been compiled by aggregating all domestic airline passenger traffic loaded and unloaded at each airport. They include passengers on flights between Australia and Norfolk Island. At ports where through-passengers transfer between flights, such passengers are counted as embarking as well as disembarking passengers.

SCHEDULED MAJOR AIRLINES PASSENGER UPLIFTS AND DISCHARGES AT PRINCIPAL AUSTRALIAN AIRPORTS

	1983–84	*1984–85*	*1985–86*	*1986–87*	*1987–88*	*1988–89p*
Sydney	5,501,492	5,900,743	6,330,523	6,660,129	7,374,065	7,541,281
Melbourne	4,550,568	4,851,880	5,155,985	5,313,403	5,827,494	5,999,957
Brisbane	2,554,622	2,684,608	2,799,420	2,973,743	3,312,524	3,581,535
Adelaide	1,684,281	1,762,845	1,824,983	1,704,871	1,833,001	1,876,691
Perth	1,049,567	1,127,184	1,245,409	1,352,214	1,437,035	1,478,055
Canberra	838,175	931,673	990,222	1,006,652	1,087,595	1,073,519
Coolangatta	567,623	630,474	731,145	844,581	1,005,622	1,080,222
Cairns	404,168	426,206	495,434	627,703	777,316	823,262
Hobart	448,549	481,612	493,411	474,345	511,308	519,055
Townsville	388,752	404,463	410,260	415,870	400,439	379,362
Launceston	352,494	390,867	361,797	351,432	351,004	371,327
Darwin	281,032	302,590	334,079	341,835	366,639	388,324

Aerodromes

As at 30 June 1990, there were 428 Commonwealth or licensed aerodromes in Australia and its Territories. Of these, 23 were owned and operated by the Federal Airports Corporation, three of them being shared with the Department of Defence. A further 42 were owned by the Commonwealth under the control of Commonwealth departments. The remaining 363 were owned by either local authorities or private organisations.

In 1989-90, capital expenditure on facilities at Commonwealth civil aerodromes was $2 million. Maintenance grants paid to licensed aerodromes under the Aerodrome Local Ownership Plan (ALOP) during the year totalled $9.1 million, of which $2.3 million was for works at Karratha where the local shire has accepted full responsibility for Karratha and Roebourne aerodromes. A further $1.5 million was paid for development works at licensed aerodromes participating in the ALOP. This included funding of $1 million for transfer works at Port Lincoln and Mangalore, and works at Forbes, Gladstone and Thangool associated with their withdrawal from the ALOP.

Upgrading of security at airports

The Commonwealth Government announced on 20 November 1989 its decision to upgrade security at 23 security designated airports around Australia. As a result, the counter-terrorist first response presence has been increased at nine airports and will be introduced for the first time at 14 other airports during June to December 1990. The Australian Protective Service is now responsible for providing this service at all major airports, except Canberra.

This decision was taken in light of international trends, assessed security needs and in response to an earlier decision by the Government to redefine the role of the Australian Federal Police (AFP). The AFP has now withdrawn from performing the uniformed policing function at all airports, except Canberra.

The need for a uniformed armed presence at airports to reduce the potential for unlawful interference with civil aviation in Australia has become increasingly important. Other countries are tightening their security measures following the explosive sabotage of Pan Am Flight 103 over Lockerbie, Scotland on 21 December 1988 and other incidents, and in response to appeals from the International Civil Aviation Organisation.

Against this background, the decision to increase the counter-terrorist presence at security designated airports demonstrates a strong commitment to aviation security, and is part of a general upgrading of aviation security arrangements in Australia.

Airway facilities

A total of 567 navigation aids were in service at 31 October 1989. The Civil Aviation Authority maintains and operates a network of 252 non-directional beacons (NDB), 108 Australian Domestic Distance Measuring Equipment (DME-D), 29 International Distance Measuring Equipment (DME-I), 86 VHF omnidirectional range systems (VOR) and 18 instrument landing systems (ILS).

Included in this total are a number of facilities on licensed aerodromes and oil platforms—65 NDBs, one DME-D, four DME-Is and two ILS which are privately owned.

In addition, there are 11 NDBs operated by the Department of Defence and 11 NDBs operated by the Department of Transport and Communications.

There are 32 Air Traffic Control Centres, 42 Flight Service Units and 27 Rescue and Fire Fighting Units in operation throughout Australia.

Air transport registrations and licences in force in Australia

At 30 June 1989, there were 8,437 aircraft registered in Australia. At the same time there were 45,399 current aeroplane pilot licence holders, including 25,436 private pilots, 5,159 commercial pilots, 1,817 senior commercial pilots, 2,497 air transport pilots and 10,490 student pilots.

In addition, there were 2,135 current helicopter pilot licence holders of which 258 were private pilots, 1,017 commercial pilots, 126 senior commercial pilots and 734 student pilots. There were also 11 gyroplane, 73 commercial balloon, 527 flight engineer and nine navigator licences in force.

Accidents and casualties

AIR TRANSPORT: ACCIDENTS INVOLVING CASUALTIES(a) AUSTRALIA(b)

	1983	*1984*	*1985*	*1986*	*1987*	*1988*
Number	44	40	31	40	44	53
Persons killed	47	45	43	44	33	63
Persons seriously injured	29	25	27	31	42	32

(a) Accidents involving civil aircraft (including registered gliders) which resulted in death or serious injury. Excludes parachutists and casualties involving non-registered aircraft.
(b) Excludes accidents outside Australia involving aircraft on the Australian register, includes all accidents to overseas registered aircraft that occur in Australia.

POSTAL, TELECOMMUNICATIONS AND RADIOCOMMUNICATIONS SERVICES

In this section, particulars for the Australian Capital Territory are included with those for New South Wales, and the South Australian figures include particulars for the Northern Territory, unless otherwise indicated.

Australian Postal Corporation

The Australian Postal Corporation operates under the *Australian Postal Corporation Act 1989* which commenced operation on 1 July 1989. This Act is the second and final stage of legislative changes to Australia Post which implement the Government's micro-economic reform package for Government Business Enterprises.

Australia Post's principal function is to supply postal services within Australia and between Australia and overseas. Its subsidiary function is to carry on any business or activity relating to postal services either domestically or overseas.

Australia Post provides surface and airmail services within Australia and to and from other countries. Special services provided include express courier, electronic mail, faxpost, lettergram, priority paid mail, business reply post, cash-on-delivery, certified mail, freepost, a security post and a number of reduced rate services.

Australia Post operates a money transfer service, sells postal products such as padded post bags, postal stationery and philatelic items, and acts as agent on behalf of Commonwealth, State and local government departments and authorities and for private sector principals.

Australia Post is the authority for the issue of postage stamps throughout the Commonwealth of Australia and its external territories.

The following tables give details of Australia Post's financial results, services and operation.

AUSTRALIAN POSTAL CORPORATION: PROFIT AND LOSS
($'000)

Year ended 30 June	*1984*	*1985*	*1986*	*1987*	*1988*	*1989*
Revenue—						
Mail services	971,676	1,080,539	1,186,422	1,370,930	1,501,487	1,644,869
Commission on agency services	90,449	94,547	87,291	83,328	89,803	88,031
Postal money order service	11,632	11,940	11,846	12,384	13,242	16,792
Other revenue	21,993	24,269	39,832	38,440	51,847	61,516
Total	**1,095,750**	**1,211,295**	**1,325,391**	**1,505,082**	**1,656,379**	**1,811,208**
Expenditure—						
Labour and related expenditure	831,600	911,776	973,294	1,049,186	1,131,190	1,251,284
Carriage of mail by contractors	92,984	103,551	109,418	121,183	132,832	151,131
Depreciation and interest	15,299	17,159	22,294	27,744	38,454	39,748
Other expenditure	131,716	154,301	189,530	252,079	298,955	323,186
Total	**1,071,599**	**1,186,787**	**1,294,536**	**1,450,192**	**1,601,431**	**1,765,349**

AUSTRALIAN POSTAL CORPORATION: PROFIT AND LOSS STATEMENT FOR THE YEAR ENDED 30 JUNE 1989
($'000)

Revenue—	
Mail services	1,644,869
Commission on agency services	88,031
Postal money order services	16,792
Other revenue	61,516
Total	*1,811,208*
Expenditure—	
Labour and related expenditure	1,251,284
Carriage of mail by contractors	151,131
Accommodation	79,334
Stores and supplies	101,801
Depreciation	34,466
Interest	5,282
Other operating expenditure	142,051
Total	*1,765,349*
Operating Profit	**45,859**
Appropriations—	
Accumulated profit brought forward	116,584
Operating profit for the year	45,859
Adjustments to provision	15,754
Accumulated profit carried forward	178,197

AUSTRALIAN POSTAL CORPORATION: PERSONS ENGAGED IN PROVIDING POSTAL SERVICES AT 30 JUNE 1989 AND 1990

	HQ	*NSW (incl. ACT)*	*Vic. and Tas.*	*Qld*	*SA (incl. NT)*	*WA*	*Aust. 1990*	*Aust. 1989*
Official staff*(a)*—								
Full-time permanent	618	12,519	9,693	4,225	2,509	2,417	31,981	30,934
Full-time temporary	19	1,536	796	415	176	184	3,126	3,855
Part-time	—	1,786	1,153	654	435	521	4,549	3,824
Other staff*(b)*	—	2,568	2,137	1,850	721	782	8,058	7,879
Total	637	18,409	13,779	7,144	3,841	3,904	47,714	46,492

(a) 'Official staff' are those whose employment is governed by the *Australian Postal Corporation Act 1989*. *(b)* Includes persons who are not employed under the Australian Postal Corporation Act, but who are engaged on the basis of business transacted. Also included are persons or organisations who hold road mail service contracts with the Australian Postal Corporation.

AUSTRALIAN POSTAL CORPORATION: MAIL DELIVERY NETWORK AND POST OFFICES AT 30 JUNE 1988 AND 1989

	NSW (incl. ACT)	*Vic.*	*Qld*	*SA (incl. NT)*	*WA*	*Tas.*	*Aust. 1989*	*Aust. 1988*
Households receiving mail	2,202,950	1,555,179	1,002,468	585,808	557,905	163,708	6,068,018	5,943,124
Business receiving mail	234,469	158,334	112,010	58,645	59,999	16,028	639,485	607,177
Post offices—								
At 1 July 1988	496	333	218	143	153	40	..	1,383
At 30 June 1989	490	330	218	141	153	40	1,372	..
Agencies—								
At 1 July 1988	925	840	521	390	247	183	..	3,106
At 30 June 1989	904	836	516	380	244	180	3,060	..
Total post offices and agencies	**1,394**	**1,166**	**734**	**521**	**397**	**220**	**4,432**	**4,489**

AUSTRALIAN POSTAL CORPORATION: TOTAL POSTAL ARTICLES HANDLED ('000)

Year ended 30 June	*Posted for delivery within Australia*	*Posted for places abroad*	*Received from abroad*	*Total postal articles handled*
1984	2,764,113	106,585	164,362	3,035,060
1985	2,877,476	107,783	163,074	3,148,333
1986	2,970,353	115,688	166,444	3,252,485
1987	3,143,251	125,995	169,306	3,438,552
1988	3,342,321	142,280	177,417	3,662,018
1989	3,564,366	157,605	193,988	3,915,959

AUSTRALIAN POSTAL CORPORATION: ORDINARY POSTAL ARTICLES(a)
('000)

Year ended 30 June	Standard articles: Posted for delivery within Australia	Standard articles: Posted for places abroad	Standard articles: Received from abroad	Total articles
1987	2,689,440	108,228	122,379	2,920,047
1988	2,862,775	122,613	128,407	3,113,775
1989	3,033,166	136,039	141,055	3,310,260
STATES—YEAR ENDED 30 JUNE 1989				
New South Wales (incl. ACT)	1,169,937	50,862	74,128	1,294,927
Victoria	860,007	37,997	40,635	938,639
Queensland	443,579	23,440	10,534	477,553
South Australia (incl. NT)	249,694	10,393	4,492	264,579
Western Australia	249,747	13,347	11,094	274,188
Tasmania	60,202	—	172	60,374

(a) Includes certified, messenger delivery and priority paid mail.

Telecommunications Services Within Australia

The Australian Telecommunications Corporation was established on 1 January 1989 after amendments to the Australian Telecommunications Act. A new Board of Directors was formed and this arrangement was continued under the Australian Telecommunications Corporation Act which came into force on 1 July 1989.

The formation of the new Corporation was in response to major Government policy changes which saw the abolition of the former Australian Telecommunications Commission. The Commission was created on 1 July 1975 under the *Telecommunications Act 1975*.

The Australian Telecommunications Corporation operates under the trading name Telecom Australia.

The responsible Minister is the Minister for Transport and Communications, assisted by the Minister for Telecommunications and Aviation Support.

Functions

The main function of the Corporation is to supply telecommunications services within Australia. A subsidiary function is to carry on, outside Australia, any business or activity relating to telecommunications.

Telecom has several obligations:

- to perform its functions in a manner that is consistent with sound commercial practice;
- to ensure that, in view of its social importance, the public switched telephone service is reasonably accessible to all people in Australia on an equitable basis, wherever they reside or carry on business;
- to ensure the performance standards for the public switched telephone service reasonably meet the social, industrial and commercial needs of the Australian community; and
- to perform its functions, in a manner that is consistent with any general policies of the Commonwealth Government notified by the Minister, any directions given by the Minister, and Australia's obligations under any convention.

Subsidiary companies and joint ventures

As at 30 June 1989, Telecom subsidiary and joint venture companies were:

- Telecom Australia (International) Ltd—100 per cent owned;

- Telecom Australia (Saudi) Ltd—50 per cent owned;
- Telesoft Communications Pty Ltd—100 per cent owned;
- QPSX Communications Pty Ltd—74 per cent owned;
- QPSX Communications Australia Pty Ltd—100 per cent owned;
- QPSX Systems Inc. (US)—100 per cent owned;
- Information Switching Technology Pty Ltd—60 per cent owned;
- Advanced Network Management Pty Ltd—60 per cent owned;
- T-Net Pty Ltd—60 per cent owned;
- Telecom Messagetech Pty Ltd—51 per cent owned;
- Natsoft Communications Pty Ltd—50 per cent owned;
- Telecom Technologies Pty Ltd—50 per cent owned;
- National Registries Pty Ltd—50 per cent owned;
- Telecom–Hewlett Packard Pty Ltd—50 per cent owned;
- AUSSAT Pty Ltd—25 per cent owned; and
- Infonet Services Corporation—5 per cent owned.

Telecom also participates in two companies, National Protocol Support Centre Ltd and Australian Electronic Development Centre Ltd which are limited by guarantee and have no share capital.

Statistics

The following table shows selected statistics relating to the latest three years of the Corporation's operations.

AUSTRALIAN TELECOMMUNICATIONS CORPORATION: SUMMARY OF SELECTED STATISTICS

Year ended 30 June		*1987*	*1988*	*1989*
		FINANCIAL		
Revenue	$ million	6,047.5	7,199.5	7,976.8
Expenses	"	5,604.2	6,423.3	7,003.7
Operating profit	"	443.3	776.6	973.1
Rate of return	%	10.6	12.0	13.8
Addition to fixed assets	$ million	2,403.1	2,236.1	2,580.5
Net value of fixed assets	"	12,759.4	12,073.1	13,045.4
		TRAFFIC (million)		
Telephone calls				
Local		7,538.9	8,074.7	8,126.5
Trunk		1,328.1	1,488.5	1,652.8
To overseas		47.8	65.9	85.1
Cellular mobile telephone calls		n.a.	27.9	74.0
Total		*n.a.*	*9,657.0*	*9,938.4*
Calls to recorded information services		129.7	137.2	124.0
		NETWORK AND OPERATIONS		
Telephone				
Demand for new services		610,267	650,809	706,120
Connection of new services		617,806	643,834	682,907
Services in operation		6,816,301	7,091,549	7,419,982
Data services				
Modems in operation		103,726	103,962	97,890
Digital data service—network terminating units		35,210	52,489	68,117
AUSTPAC service—number of outstations			3,924	6,015
		STAFF		
Average full-time staff		93,857	89,659	84,104

Australia's National Satellite System—AUSSAT

AUSSAT Pty Ltd

AUSSAT Pty Ltd was established by the Commonwealth Government in November 1981 as a commercial company to own, operate and manage Australia's National Satellite System.

AUSSAT's Memorandum and Articles of Association and the *Satellite Communications Act 1984* require the company to:

- provide a telecommunications system for Australia by using space satellites and make available the facilities for use in telecommunications systems in neighbouring regions;
- provide service on a non-discriminatory basis and to set fair and equitable charges; and
- operate as a commercial taxpaying enterprise paying reasonable dividends to the shareholders.

The company currently has a paid up equity capital of $100 million. Seventy-five per cent of its shareholding is held by the Australian Government with the remaining 25 per cent being held by Telecom Australia.

AUSSAT has a board of nine directors and employs a staff of some 270 people, the majority of whom are highly qualified engineers, technicians and scientists.

The Australian National Satellite System

AUSSAT's first generation satellite system comprises three Hughes Aircraft Company HS 376 spin stabilised satellites. Geostationary orbit locations are: AUSSAT 1—160°E longitude, AUSSAT 2—156°E longitude with AUSSAT 3 at 164°E longitude, some 36,000 kilometres above the earth, directly over the equator.

Each satellite has a minimum design life of seven years. The first two satellites, launched by the Space Shuttle in August and November 1985 respectively, are expected to achieve a seven and a half-year life. It is expected that AUSSAT 3, launched in September 1987 by the European ARIANE rocket, will achieve an on-orbit life of some ten years.

Each satellite carries four high powered (30 watt) transponders and eleven standard power (12 watt) transponders, providing a total of 12x30 watt transponders and 33x12 watt transponders on the three satellite first generation system. The satellites operate in the 12–14 GHz KU Band, on a dual polarised basis to provide for re-use of band width.

The three dish antenna system used on the Australian satellites is a unique and distinguishing feature. The antenna array enables each satellite to provide national beam coverage of the entire Australian continent and its offshore regions and four spot beams covering:

- North-East (Queensland);
- Central Australia (Northern Territory and South Australia);
- West (Western Australia); and
- South-East (New South Wales, Victoria and Tasmania).

The satellites also have the capability of providing a switched beam to cover Papua New Guinea, and AUSSAT 3 has a switched beam capability covering the south-west Pacific region and New Zealand.

AUSSAT also operates two telemetry, tracking command and monitoring ground stations. The main centre is located in the Sydney suburb of Belrose, and it is from this station that final positioning and maintenance of the satellites in the geostationary orbit is monitored and controlled. A backup to the Belrose Satellite Control Centre is located in the Perth suburb of Lockridge.

Ground segment

AUSSAT owns and operates a network of eight Major City Earth Stations (MCES) located in Melbourne, Hobart, Adelaide, Perth, Darwin, Brisbane, Sydney and Canberra.

These facilities are designed to provide 'gateway' access to the satellites for AUSSAT customers whose requirements for services do not warrant the purchase of their own satellite earth stations. Microwave or land line connection from each station to customer premises is available.

Applications

The first AUSSAT satellite was commissioned for service on 1 October 1985 with the second satellite coming on-line on 1 January 1986 and AUSSAT 3 in November 1987.

Since commencing operation, the satellite system has proven to be an outstanding success with demand for capacity being far greater than originally projected. More than 80 per cent of available capacity on the first two satellites has been contracted and is now in service.

The design of the satellite communications payload and beam configuration provides multi-purpose capabilities for the system. It allows for the provision of broadcast services for television and radio, as well as program distribution and interchange and for a full range of telecommunication services such as voice, video, telex and data.

Summary of current AUSSAT applications

Broadcasting direct-to-home

The single largest application at the present time is the provision of broadcasting services for television and radio directly into homes in remote outback regions of Australia. This service, known as the Homestead and Community Broadcasting Satellite Service (HACBSS) is being provided, initially, by the Australian Broadcasting Corporation (ABC). The HACBSS service provided by the ABC comprises television programming, two AM radio services and a stereo FM radio service.

With the launch and commissioning of AUSSAT 3, the service provided by the ABC is being supplemented by a similar commercial service known as the Regional Commercial Television Service.

Major network television

Australia's three major television networks are also large users. Each network has leased a standard power (12 watt) transponder and is using the satellite system for program distribution, news gathering and itinerant special program events, such as sporting fixtures.

Aviation

The Department of Transport and Communications has contracted for a total of four standard power transponders which will be used to establish a fully duplicated network of reliable voice and data links between 46 staffed air traffic control facilities and 55 unstaffed remote VHF air-to-ground facilities throughout Australia.

Commercial applications

Apart from the applications detailed above, AUSSAT has contracted with a number of government agencies and commercial organisations for the provision of a wide variety of services. Uses range from the provision of private network voice, video and data services to exciting applications in entertainment distribution, remote and long distance education, emergency services, health and medical services, including the use of slow scan television for diagnostic purposes.

The next generation

AUSSAT has contracted for the manufacture and in-orbit delivery of its second generation satellite system planned for launch in 1991–92.

The system, to be built by Hughes Communications International of Los Angeles, United States, will comprise two much larger satellites providing increased capacity and higher power.

Apart from ensuring continuity of established services, the second generation satellites will carry L Band transponders to enable the establishment of a domestic mobile satellite service. This service will be operational by 1992 and could potentially be the first such domestic service in the world.

Overseas Telecommunications Services

OTC Limited

OTC Limited has provided Australia's telecommunications links with the world since 1946.

Formerly the Overseas Telecommunications Commission, OTC had its beginnings in the early 1940s, when the Australian Government decided it should control its own international communications services which were then being provided by private enterprise companies.

The primary areas of activity for the infant OTC were international telegraph, radio telephone services and a coastal radio service which still provides commercial communications, weather, navigational and distress services to maritime traffic in Australian coastal waters.

Communications networks

From the 1950s, when the expansion of international business required the girdling of the globe with coaxial cable systems, OTC has been a major investor in new communications technologies. It is one of the world's largest owners of submarine cable systems and was early to recognise the potential of satellite communications.

OTC is a founding member of both the International Telecommunications Satellite Organisation (INTELSAT) and the International Maritime Satellite Organisation (INMARSAT).

It is now using its experience of more than 40 years to develop communications networks in other parts of the world. It has built satellite earth stations in locations as diverse as the Antarctic, Vietnam, the Cocos and Christmas islands, Malta and Laos.

From the beginning of 1990, it will provide the opportunity for 15 small nations in the South Pacific to gain access to modern, satellite-based communications systems, hubbed from the OTC Sydney Satellite Earth Station.

OTC became a company, OTC Limited, on 1 April 1989. All shares are held by the Australian Government.

Parallel changes to the industry's regulatory framework have introduced a more competitive marketplace. This new environment has led OTC to become a joint venturer with other companies in the Australian domestic value added services market with particular interests in electronic mail, electronic documents interchange, communications computer software and database access.

In the year ended 31 March 1990, OTC reported a record after-tax profit of $234.5 million from total revenue of $1,517 million. The company expects to invest more than $2,000 million on expanding Australia's international telecommunications capacity in the next decade.

Over 2,000 people are currently employed by OTC.

OTC has satellite earth stations in Sydney, Perth, Ceduna, and Melbourne; it has cable stations in Cairns, Sydney, Norfolk Island and Perth; international gateway exchanges in

Sydney and Melbourne, with another under construction in Perth; international radio stations in Sydney; and 13 maritime communications stations around Australia's coastline.

OTC's corporate headquarters are in Sydney and it has business offices in Melbourne, Brisbane and Canberra. It also maintains international business offices in London, New York, Tokyo, Bangkok, Wellington and Hong Kong.

Radiocommunication Stations

At 30 September 1989, there were 1,012,847 civil radiocommunication stations authorised for operation in Australia and its Territories. Of these, 508,115 were associated with land mobile services, 49,023 were fixed services, 69,754 were for marine services, 322,281 were citizens band (CB) stations and 18,154 were amateur stations. Particulars of broadcasting stations are shown in the following section.

BROADCASTING AND TELEVISION

Radio and television broadcasting falls within the jurisdiction of the Commonwealth Government and pursuant to the *Broadcasting Act 1942*, is one of the responsibilities of the Minister for Transport and Communications. Commonwealth bodies which are involved include the Australian Telecommunications Corporation (Telecom), the Australian Broadcasting Corporation (ABC), the Special Broadcasting Service (SBS), the Australian Broadcasting Tribunal (ABT), the Department of Transport and Communications, the Overseas Telecommunications Corporation (OTC), AUSTEL and AUSSAT Pty Ltd.

Basically, the Australian broadcasting system comprises the following types of services:

- national radio and television services broadcasting programs produced by the Australian Broadcasting Corporation and the Special Broadcasting Service;
- commercial radio and television services operated by companies under licence; and
- public radio services operated by incorporated associations under licence on a non-profit basis.

As from 1 January 1977, the Minister for Transport and Communications assumed responsibility for broadcasting planning, including all matters relating to the technical operation of stations, and for the investigation of interference to the transmission and reception of programs.

The Australian Broadcasting Corporation

The Australian Broadcasting Corporation (ABC) is an independent statutory corporation funded primarily by appropriation from the Commonwealth Parliament.

The ABC, founded as the Australian Broadcasting Commission on 1 July 1932, became the Australian Broadcasting Corporation on 1 July 1983.

The *Australian Broadcasting Act 1983* requires the ABC to:

- provide within Australia innovative and comprehensive radio and television services of a high standard;
- provide programs that contribute to a sense of national identity, inform and entertain, and reflect the cultural diversity of the Australian community;
- provide radio and television programs of an educational nature;
- promote Australia's musical, dramatic and other performing arts; and
- transmit to other countries radio and television programs of news, current affairs, entertainment and cultural enrichment.

National Broadcasting Service

The ABC provides:

- five main radio services across Australia on 403 transmitters:
  - — Metropolitan Radio in all State capitals, Canberra, Darwin and Newcastle;

  - — Regional Radio studios and outposts in over 40 regional centres throughout Australia;
  - — Radio National, a nationally networked service which is being extended throughout Australia;
  - — ABC-FM, a national network devoted to music and performance; and
  - — Triple J, and FM youth network which is being made available to State capitals, Canberra and Newcastle.

- a national television service carried on 471 transmitters with television production and transmission centres in all State capitals, Darwin and Canberra; and
- ABC concerts (the ABC is also responsible for six Symphony Orchestras).

Television and radio programs produced by the ABC are broadcast through transmitters operated by Telecom Australia on behalf of the ABC and the Department of Transport and Communications.

International Broadcasting Service

Seven high frequency stations at Shepparton (Victoria), three on the Cox Peninsular at Darwin (Northern Territory), three at Carnarvon (Western Australia) and two at Brandon (Queensland) provide the international shortwave service known as Radio Australia. The transmitters are maintained and operated by Telecom Australia, with programs arranged and presented by Radio Australia from its Melbourne studios. There is an emphasis on news and current affairs, information programs and sports coverage serving the needs and interests of the Asia/Pacific region.

The broadcasts—in English, Indonesian, Standard Chinese, Cantonese, Tok Pisin, French, Thai, Japanese and Vietnamese—are directed to the Pacific, Southeast/South Asia and North Asia. The English Service is also heard in the Middle East, United Kingdom, Europe and North and South America. Overall, the services reach an estimated 50 million regular listeners.

The Special Broadcasting Service

The Special Broadcasting Service (SBS) was established by the Commonwealth Government on 1 January 1978 to provide multilingual radio services and, if authorised by regulations, to provide multilingual television services. A regulation authorising the provision of multilingual television services was gazetted in August 1978. The service is also empowered by the *Broadcasting Act 1942* to provide broadcasting and television services for such special purposes as are prescribed by the Government.

In carrying out its functions, the SBS provides multilingual radio services to the Melbourne metropolitan area and Geelong through radio station 3EA which broadcasts in 55 languages for 126 hours per week; the Sydney metropolitan area through radio station 2EA which broadcasts in 59 languages for 126 hours per week; the provincial centres of Newcastle and Wollongong in NSW through 2EA translator services; plus on relay to a small number of public broadcasting stations throughout Australia.

It also provides Australia's sole national UHF-only television network. Since inception in October 1980, SBS-TV has grown from servicing Melbourne and Sydney only, to providing a television transmission in all capital cities (except Darwin) plus several major regional centres.

The commercial radio and television service

Commercial radio and television services are operated by companies under licences granted by the Australian Broadcasting Tribunal and with technical operating conditions determined by the Minister for Transport and Communications. The services obtain income from broadcasting advertisements. At 30 June 1990, there were 146 commercial radio services in operation in Australia (including three supplementary licences). Call signs for radio

services are prefixed by numerals indicating each State of Australia (2—New South Wales and the Australian Capital Territory, 3—Victoria, 4—Queensland, 5—South Australia, 6—Western Australia, 7—Tasmania, 8—Northern Territory). In addition, there were 47 commercial television services in operation in Australia. Many of these services have one or more radiocommunications transmitters to enable the service from the principal transmitter to be provided to the entire service area.

A number of commercial radio and television transmitters known as rebroadcasting services were in operation at 30 June 1990. These have low power and are designed to receive and rebroadcast the signals of the service in whose area they are located. The permits are not held by the licensees of the service which is being rebroadcast but are held by a community group or a company in the area, a local council or some other government authority. The ABC and some SBS services are retransmitted in this manner.

At 30 June 1990, there were three remote commercial television services licensed, transmitting their programs via satellite to remote localities in the Western Zone (Western Australia), Central Zone (Northern Territory and South Australia) and North-East Zone (Queensland).

There was also one remote radio service providing a monophonic service via satellite to remote localities in the Western Zone.

The public broadcasting service

The Broadcasting Act also makes provision for the granting of licences for the operation of public radio and television services. At 30 June 1990, 80 public radio services were broadcasting programs ranging from fine music to ethnic languages and programs produced by and directed towards specific communities. Some public radio services are associated with tertiary educational institutions. There are no public television services permanently operating in Australia.

Radiocommunication stations

At 30 June 1990, there were 1,185,181 civil radiocommunication stations authorised for operation in Australia and its Territories. Of these, 610,407 were associated with land mobile services, 52,289 were fixed services, 75,526 were for marine services, 380,037 were citizen band (CB) stations and 18,689 were amateur stations. Particulars of broadcasting stations are shown below.

BROADCASTING STATIONS, 30 JUNE 1990

Type of station	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
National ABC—									
Medium frequency (AM)	25	9	22	11	25	7	6	3	108
High frequency (HF)	—	—	2	—	1	—	3	—	6
Very high frequency (FM)	26	9	89	25	68	7	25	1	*(a)*250
National SBS—									
Medium frequency (AM)	3	1	—	—	—	—	—	—	4
Very high frequency (FM)	—	—	—	—	—	—	—	—	—
International—									
Short wave (Radio Australia)	—	7	3	—	3	—	3	—	16
Commercial—									
Medium frequency (AM)	47	19	34	9	22	8	3	2	144
Very high frequency (FM)	7	5	6	3	10	1	1	2	*(a)*35
Public—									
Medium frequency (AM)	2	2	2	1	1	1	—	2	*(b)*11
Very high frequency (FM)	32	17	9	7	5	5	7	1	83

(a) Includes services licensed under Self-Help Scheme. *(b)* Includes RPH service.

TELEVISION TRANSMITTER STATIONS, 30 JUNE 1989

Type of station and location	*NSW*	*Vic.*	*Qld*	*SA*	*WA*	*Tas.*	*NT*	*ACT*	*Aust.*
National—									
Metropolitan television	6	12	4	4	2	4	1	6	39
Country television	74	29	114	21	69	21	26	—	354
Total, National	*80*	*41*	*118*	*25*	*71*	*25*	*27*	*6*	*393*
Commercial—									
Metropolitan television	9	21	9	6	3	2	1	7	58
Country television	76	25	68	18	71	20	7	—	285
Total, Commercial	*85*	*46*	*77*	*24*	*74*	*22*	*8*	*7*	*343*

The Australian Broadcasting Tribunal

The Australian Broadcasting Tribunal came into being on 1 January 1977. It is an independent statutory authority established by the *Broadcasting Act 1942* to regulate some aspects of commercial and public radio and commercial television in Australia. The Tribunal is empowered to grant, renew, suspend or revoke licences, to determine program and advertising standards applicable to licensed stations, to authorise changes to the ownership and control of licences, and to collect and make available information about broadcasting in Australia. In particular, the Tribunal is required to conduct public inquiries into the granting of licences following the invitation of applications by the Minister. The Tribunal may also conduct inquiries into the renewal of licences, the setting of standards of broadcasting practices, alleged breaches of licence conditions and other matters.

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Road Freight Activity of Private Enterprises by Industry Division, Australia and States, 1983–84 (9107.0)

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Road Traffic Accidents Involving Fatalities, Australia (9401.0)

Road Traffic Accidents Involving Casualties (Admission to Hospitals), Australia (9405.0)

Other Publications

Information additional to that contained in ABS publications is available in the annual reports and other statements of the Department of Transport and Communications, the various harbour boards and trusts, the several government railway authorities, the Federal Airports Corporation, the Australian Postal Corporation, the Australian Telecommunications Corporation, and the Australian Broadcasting Corporation.