CHAPTER FOUR: CHRISTMAS ISLAND

Commonwealth Legislative Role

4.1   In 1958 Christmas Island became an Australian territory with the *Christmas Island Act 1958* providing the legislative basis for the Territory's administrative, legislative and judicial system.[1]

4.2   The Commonwealth Grants Commission reported that much of the Commonwealth's current responsibility for Christmas Island's residents stems from past exploitation of the Island's phosphate deposits for Australia's pastoral and agricultural industries. Between 1949 and 1981 the mine was jointly owned by the Australian and New Zealand Governments and then wholly by a Commonwealth owned company. The mine is now operated by Phosphate Resources NL, a company made up of shareholders resident on the Island.[2]

4.3   In 1984 the Australian Government announced its decision to move towards a 'normalisation' policy and extend mainland laws to Christmas Island. The first step to achieve this occurred in 1992 when the Territories Law Reform Act applied most Commonwealth legislation and Western Australian legislation to Christmas Island replacing the colonial, Singapore-based laws. It was planned that the remaining Commonwealth and appropriate Western Australian laws would be progressively extended to the Territory.

4.4   In 1992 the Local Government (Transition) Ordinance established the Christmas Island Shire Council with the same powers as a Western Australian shire council.

4.5   Like Norfolk Island, the Administrator for Christmas Island is appointed by the Governor-General and subject to the direction of the Minister for Transport and Regional Services.

4.6   The role of the Commonwealth is at all three levels of government since the Commonwealth created the shire council. Many Commonwealth agencies have accepted responsibility for providing services to the Island. State-type functions are also the responsibility of the Commonwealth but are provided through Service Delivery Arrangements (SDAs) or informal agreements with Western Australian agencies, direct by the Christmas Island Administration or through agency arrangements with the Council. The Christmas Island Shire Council provides local government services. However, the Commonwealth provides all government expenditure on Christmas Island, except the funds raised by the Shire.

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1   See Table 4.1.

2   Commonwealth Grants Commission, 1995, op. cit., pp. 7-9.

4.7   The Commonwealth Government's objectives for Christmas Island are:

> To align conditions and standards in the IOTs [Indian Ocean Territories] with those of comparable communities in the rest of Australia; to provide residents of the IOTs, over time, with rights, opportunities and responsibilities equal to those of their fellow Australians; to enhance economic development; to protect the natural and cultural heritage in the IOTs; and to deliver government services efficiently, effectively and equitably.[3]

4.8   For the purpose of federal elections the residents of Christmas Island are part of the Commonwealth Division of the Northern Territory.   This is somewhat anomalous as, where not supplied by the Commonwealth Government, services are distributed by the Government of Western Australia.   The logic of this arrangement may need to be reviewed.

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3   *Department of the Environment, Sport and Territories annual report 1996-97*, p. 121.

Table 4.1   Constitutional background on Christmas Island

Date	Constitutional status
1888	Annexed by the British Government as an uninhabited Territory
1889	For administrative purposes the Island was incorporated within the Straits Settlement
1990	Incorporated in the Settlement of Singapore
1946	Under Singapore Colony Order in Council, Christmas Island became part of the Colony of Singapore
1 January 1958	Made separate British Crown Colony
1 October 1958	Following request by Commonwealth of Australia to the UK Parliament it became an Australian Territory under the *Christmas Island Act 1958*. Under that Act laws in force on the Island immediately before transfer to Australia were to continue (ie, laws of the Colony of Singapore as specified in the Christmas Island Order in Council 1957 plus certain regulations made by the Administrator of the Colony of Christmas Island during the period 1 Jan - 30 Oct 1958).
1984	Australian Government announced decision to move towards 'normalisation' policy and extension of mainland laws to Christmas Island. First Christmas Island Assembly elected by residents in 1985.
1991	Both Commonwealth Government and the Christmas Island Assembly endorsed a *Proposed package of changes extending to the residents of Christmas Island rights, opportunities and obligations equivalent to those of their fellow Australians in comparable communities.*
1992	As a first step in 'normalisation' the *Territories Law Reform Act 1992* applied the bulk of Commonwealth and Western Australian law to the Territory. Remaining Commonwealth and appropriate Western Australian laws would be progressively extended to the Territory. On 1 July 1992 the *Local Government (Transition) Ordinance 1992* (under the *Christmas Island Act 1992*) established the Christmas Island Shire Council to direct and provide services to residents of the Island. The Council has the same powers as a Western Australian shire council. It replaced the Assembly and Services Corporation. Commonwealth Government set policy objective of reducing size of its staff on the Island by devolving functions where possible to State or Commonwealth agencies, the Shire Council or the private sector.

Data Source: Commonwealth Grants Commission, *Report on Christmas Island inquiry 1995*, Canberra, AGPS, 1995, pp. 7-13.

Postal Services and Air Freight

4.9   The Post Office at Flying Fish Cove provides postage and philatelic services. It has access to EPOS[4], EFTPOS and provides some banking services. Australia Post delivers all mail to post office boxes or private bags, noting that some residential addresses lie up to seven kilometers away. The Island's postal zone falls within the north Western Australian region 3, with postcode 6798. Local mail delivery within the island costs 45c per standard letter. The Committee visited the Post Office for discussions with the manager and inspected the system of sorting and handling the mail. It appeared to be most efficient.

4.10   The mail service is slow. The Supervising Scientist Group claimed that unless documents were posted in Express Post bags they were likely to be delivered by ship. Even Express Post can be delivered by ship if off-loaded from the plane. Sea mail is impossibly slow and erratic.[5]

4.11   The mail service by air has undergone recent changes. The National Jet Systems Group operates a weekly service on Saturday between Perth and the Indian Ocean Territories (IOT) of Christmas Island and the Cocos (Keeling) Islands. The Minister announced in late June 1998[6] the need for an additional fortnightly mid-week service had been identified to carry additional and urgent freight to the territories. Passengers are also carried on this mid-week service, and it is expected that this service will be continued for both territories. The Commonwealth has been involved with underwriting these air services since October 1997. A monthly surface mail service is provided by ship.

4.12   Problems identified[7] included:

•   mail is often offloaded from aircraft, making the frequency of delivery uncertain;

•   access to alternative courier services, as available on the mainland, is not an option;

•   Express Post through Australia Post is costly, and

•   air courier service is available, but the excessive consignment fee ($45) per consignment prohibits use of this service. The consignment fee applies to the delivery of any newspapers to the Island. Weekend papers, available to the public the following Thursday, cost between $4.50 and $15 per paper compared with $1.40 in Perth. Papers are not regular as they are often off

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4   Electronic Point-of-Sale on-line banking facility.

5   Department of the Environment and Heritage, *Submissions,* p. S164.

6   Media Release, S62/98 of 26 June 1998.

7   Christmas Island District High School, *Submissions*, p. S22.

loaded depending on the amount of passengers, luggage and freight on the plane on Tuesday.[8]

4.13   At public hearings, witnesses explained that the two flights a week did not carry mail as a priority item. Priority was given to medical supplies, perishable food items for shops and then mail. Invariably mail was offloaded. Only if there were adequate space would the mail be included. The Committee was told that this was not 'something that happens now and then; it is something that happens quite frequently'.[9]

4.14   Sometimes telephones had been disconnected before the telephone bill had arrived.[10] Even emergency supplies, such as blood products and vaccines, have been off-loaded at times. If not refrigerated, they deteriorate and are wasted.[11] A further example was the prospectus for the sale of Telstra shares – not many people on Christmas Island would have bought shares because the prospectus arrived the day after the shares were sold.[12] The submission from the Christmas Island Post Office listed a number of frustrations and problems associated with the failure of the mail service. The list illustrated the continuing reliance on original documents in a number of areas. They included:

- Cost of newspapers ($8 per copy) and out of date newspapers so that people on the Islands miss opportunities for jobs etc.;

- Applications for employment which arrive late or not at all;

- Student assignments which do not arrive until after the due date;

- Student subject selections which arrive late and could prejudice enrolments;

- Delay in the transfer of legal documents such as property settlements, lease agreements and mortgages;

- Late payment of accounts, leading to reduced credit availability, legal action or withdrawal of services;

- Delay in passport applications, and

- Delay in the Government payment of accounts which only occurs on the receipt of original invoices.

4.15   Witnesses on both Christmas and Cocos (Keeling) Islands suggested that the size of the plane was the limiting factor. The National Jet RJ70 which supplies the

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8   Department of the Environment and Heritage, *Submissions,* p. S163.

9   Shire of Christmas Island, *Transcripts,* p. 282.

10   Shire of Christmas Ialand, *Transcripts*, p. 280.

11   Indian Ocean Territory Health Services, *Transcripts,* p. 294.

12   Shire of Christmas Island, *Transcripts,* p. 281.

service has a range with maximum payload of 2,666 kilometres.[13] It has a seating capacity 70 passengers.[14] The capacity (tonnes) of the RJ70 is as follows:

Maximum take off weight	43.1
Zero fuel weight	33.8
(Fuel weight)	9.3
Maximum payload weight	9.5
(Empty weight check)	24.2

4.16   Assuming that it carries 70 passengers and four crew, each, with their luggage, weighing 100kg, equating to 7.4 tonnes, that leaves a freight capacity of 2.2 tonnes. The Department of Transport and Regional Services made the point to the Committee that the maximum range depended entirely on the weight mix of fuel and total payload. If a full fuel load is carried, the payload is restricted, meaning fewer passengers or freight.

> Although the RJ70 could in theory fly non-stop from Perth to Cocos, it is not allowable because of the fuel reserves that it may be required to hold for arrival or for possible diversion to Christmas Island or return to Learmonth if conditions should close in on Cocos. Flying from Cocos to Perth direct is allowable because of the navigation aids available at Perth plus the alternate airfields nearby.[15]

4.17   The service had to supply both Islands on any run. Witnesses considered that, even with the second fortnightly service, instituted by the then Minister for Transport and Regional Development in May 1998, the capacity was inadequate. Given the size of the plane and the amount of fuel necessary to fly the distances to Christmas and Cocos Islands, the added flight was not sufficient to carry all the freight and passengers required.

> [W]ith one flight a week we are going backwards with freight. So we need a second one to make up on freight, and then if we get more passengers on it we start going backwards again. … If we start to put tourists on it, then we need more air freight, because they consume a lot more fresh vegetables than the locals would. There is no way you could catch up using a (BAe) 146. You would have to have another one bringing the luggage.[16]

> We have been in situations where there has been only Saturday services, where we have had an extended period of no Wednesday aircraft services, when vast volumes of fruit and vegetables have been offloaded and we have received no airmail at all. In fact the aircraft has been

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13   Christmas Island is 2,623 km northwest of Perth and 2,800 km west of Darwin and 500 km south of Jakarta. The Cocos (Keeling) Islands are 2,768 northwest of Perth, 3,700 west of Darwin and 1,300 km southwest of Jakarta.

14   Figures taken from *World Aviation Directory*, Jane's: All the World's Aircraft, 1997-98.

15   Department of Transport and Regional Services, *Submissions,* pp. S305-S306.

16   Cocos Islands Regional Business Association, *Transcripts,* p. 376.

required to service both Cocos and Christmas with a single Saturday movement. If the 146[17] is travelling to Cocos Islands with a full passenger load of 68. … then they have about 800 kilos of cargo left once they have the passengers luggage on. The Indian Ocean Territories' combined requirement for air freight is in excess of three and a half tonnes per week.[18]

4.18   The contract for National Jet services to the Indian Ocean Territories expires in June 2000 although the funding commitments expire at the end of the current financial year and are a matter for consideration in the context of the budget.[19] The Committee believes that the needs of the Indian Ocean Territories for greater aircraft capacity must be accommodated in the next tender for the service.

4.19   In addition, in early 1999 when they were issued with air operator certificates, two private operators began offering weekly air services to Jakarta, carrying a mix of freight and passengers. These services had begun as intermittent flights in August or September 1998. They offered a flight from Christmas Island to Jakarta for about $400.[20] Representatives of the Department of Transport and Regional Services told the Committee that, although the new flights had the capacity to relieve some of the pressure on the carriage of freight to the islands[21], mail was still a problem and that passengers using the service to get to the mainland had to overnight in Jakarta.[22] The flights are only between Christmas Island and Jakarta; they do not fly between Christmas Island and the Cocos (Keeling) Islands which would be a domestic route. This has raised an issue of the legality of aircraft licensed overseas flying on a domestic route.[23]

Delivery standards

4.20   Postal services are provided through an agency of Australia Post and mail is delivered to a set of post office boxes, for which a fee is paid. There is no home delivery service. Residents have commented that the boxes were not easily accessible for all people (they were up to seven kms from the furthest homes in the built up area) and that all mail resulted in costs at air freight rates. It is a difficult place to walk around for some distance because it is extremely hot and extremely hilly.[24] Local mail delivery within the Island costs 45c per standard letter. The Commonwealth Grants Commission recommended that before the Australia Post agency contract was let again, the standard level of service on the mainland should be examined.[25]

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17   The BAe146 was an older version of the RJ70.

18   Cocos Islands Regional Business Association, *Transcript,* p. 378.

19   Department of Transport and Regional Services, *Transcripts,* p. 11.

20   Department of Transport and Regional Services, *Transcripts,* p. 6.

21   Department of Transport and Regional Services, *Submissions,* p. S266.

22   Department of Transport and Regional Services, *Transcripts,* pp. 6-7.

23   Department of Transport and Regional Services, *Transcripts,* p. 8.

24   Shire of Christmas Island, *Transcripts,* p. 280.

25   Commonwealth Grants Commission, *Submissions*, p. S54.

Broadcasting

4.21   Improvements in broadcasting on Christmas Island have been relatively recent. Up to 1995, television broadcasts were received by the recording of ABC programs in Perth on video cassettes which were then shown on the Island a week later.[26] Now a somewhat greater diversity of programming prevails on Christmas Island compared to Cocos Island. It is understood that the Island Administration has lately re-transmitted ABC Regional Radio and Radio National on the AM band and a Perth-based commercial station on the FM band. A community broadcasting service transmits English, Malay and Chinese programs on two FM bands. ABC and GWN television are available as well. Radio Australia is available on short-wave radio or from the Palapa satellite. Various international satellites provide an alternative to the ABC and GWN television services for those individuals who have receivers and appropriate decoders.

4.22   At the public hearing, the Christmas Island Shire Council expressed fears that, with the changes to the new digital satellites, the Island would revert to 'that Stone Age of telecommunications that we were in in 1994'[27] with no mobile phones, analogue or digital, no Internet and no live television broadcasts. While the Committee believes that their fears might have been overstated they were not completely unfounded.

4.23   With the impending shift to digital services on the new OPTUS system, Christmas Island, like Cocos, will lose access to Australian broadcasts previously carried by OPTUS (ABC and GWN)[28]. OPTUS representatives informed the Committee that OPTUS would have a capacity to reach the Indian Ocean Territories with its new C1 (digital) satellite; however to continue broadcasts on the C1 satellite to the Indian Ocean Territories would require an expensive investment in new infrastructure and the inclusion of the territories in the long term planning processes that go into the provision of satellites. OPTUS had made no decision about that at the time of the inquiry.

> … provision of services to these areas [the External Territories] could be at the cost of the signal strength available to service the rest of Australia. Given the small, or lack of permanent, populations in some of these areas, commercial provision of services is probably unlikely without Government intervention and support.[29]

4.24   While OPTUS services would not continue, Administration representatives informed the Committee that Telstra's contractual arrangements through PanAmSat and the purchase and installation of the necessary equipment by the Administration should ensure a continuation of existing radio and television services[30] as well as the addition of new programs. An improved satellite dish and new digital cabling on

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26   Shire of Christmas Island *Transcripts,* p. 271.

27   Shire of Christmas Island, *Transcripts,* p. 272.

28   See FN 19.

29   OPTUS *Submissions,* p. S135.

30   These included GWN which has transferred to Telstra and a test of the ABC service via Telstra.

Christmas Island cost the Administration $67,500.[31] Moreover, the Department of Communications, Information Technology and the Arts told the Committee that, in order to maintain broadcasts to the territories, additional Commonwealth funding could be considered should there be a need for more expensive technology, such as dedicated satellite channels, involving an annual expenditure of $0.5 million - $1million.[32]

4.25   In February 1999, Telstra informed the Committee that it had added WIN to its customers on the PanAmSat and that, with suitable retransmission equipment on the island, WIN should be able to be received on both of the Indian Ocean Territories.

4.26   The assurances about the continuation of the broadcast services did not necessarily address the quality of the service. Reception depends on the prevailing weather.[33] When the weather is bad or there is significant cloud cover, the television 'drops out'. The Indian Ocean Territories remain outside the guaranteed footprint for the reliable reception and therefore Telstra would give no guarantee of the quality of the service.

> At the moment we might put up with a couple of drop outs a day lasting anywhere from a couple of seconds to a few minutes. But if it rained continuously for two or three weeks during the wet season then we would find that we would lose that television and radio signal for a much greater proportion of the day.[34]

Local impacts

4.27   IOCOMM, the Internet service providers on Christmas Island, identified a demand for free and subscription television services but noted that there was no Australian licensed pay television provider covering the region.[35] IOCOMM had assisted in establishing the Sky Channel service locally. During the hearings, OPTUS indicated that it was considering the feasibility of offering pay television over satellite.[36] OPTUS noted that its choice of decoding standards would enable pay television via satellite without involving viewers in the purchase of additional equipment, but initially, it would not serve the Islands.

4.28   OPTUS expected the normal costs of providing Pay TV infrastructure to the home to be between $750 to $1000, depending upon the specific location, or the degree to which OPTUS agreed to subsidise the service. The monthly Pay TV subscription charge was likely to be between $9.95 to $49.95, depending upon the selected package.[37]

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31   Department of Communications, Information Technology and the Arts, *Submissions,* p. S263.

32   Department of Communications, Information Technology and the Arts, *Submissions,* p. S190.

33   Department of Transport and Regional Services, *Submissions*, p. S175.

34   Christmas Island Administration, *Transcripts,* p. 274.

35   IOCOMM, *Submissions*, p. S35.

36   OPTUS, *Transcript,* p.48.

37   OPTUS *Submissions*; p. S219.

4.29   Of particular concern was the inability of the High School to access to the Westlink service offered in Western Australian under the auspices of the Education Department. Westlink was described to the Committee as an interactive service that provided education programs for young children through to tertiary students. It required one-way vision and two-way radio and operates on a digital system. To access it on Christmas Island the school would need to acquire a digital dish and a digital decoder.[38] Again the satellite link was the limiting factor.

4.30   The Westlink education service is due to cease transmission to the IOT once OPTUS' digital satellite became operational. GWN television pointed out an alternative.[39]   They suggested a satellite spot beam could provide Westlink to Christmas and Cocos Islands. However, annual rental costs for a spot beam equated to those for a national beam, that is at about $1 million.[40] GWN suggested that Telstra could provide a more affordable satellite service for the provision of Westlink to the Indian Ocean Territories.[41]

4.31   Newspaper delivery to the island depends upon air cargo space availability. Any new service to Singapore or Jakarta may assist in that regard and the Federal Government has made progress in arranging airline services to them[42].

Telecommunications

Current technology

4.32   Telstra commenced extension of its telecommunications network to Christmas Island from May 1995, replacing the original network with a fixed AMPS network plus some direct customer cables. While the fixed AMPS service used the same technology as the mobile equivalent, Telstra charged the normal rates applying for the Public Switched Telephone Network to 1047 customers (including 147 mobile phone users)[43]. At the beginning of the inquiry, the telephone customers lacked access to free calls, carrier preselection or number display, but with completion of a new exchange, cables and new satellite equipment, by June 1999, standard mainland service should then be available to all. By February 1999, all 1800 Freecall services were available to both the Indian Ocean Territories.[44]

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38   Christmas Island District High School, *Transcripts,* pp. 306-307.

39   GWN, *Transcripts*, p. 253.

40   GWN, *Transcripts*, p. 255.

41   GWN, *Transcripts*, p. 255.

42   Minister for Regional Development, Territories and Local Government: Media Release 26-6-98.

43   The number of customers dropped during the course of the inquiry. In its first submission Telstra quoted 1500 fixed customers including 300 mobile users. Telstra, *Submissions,* p. S99 & Telstra, *Submissions,* p. S209

44   Telstra, *Submissions,* p. S229.

4.33   Currently Telstra's provision of services to the Indian Ocean Territories runs at a substantial loss.[45] Telstra informed the Committee that it had expended $2.2 million to 30 June 1998 and expected to expend a further $2.3 million by June 1999 on the upgrade of the telephone system. Overall the expenditure on the improvement of the Christmas Island network was expected to total $8 million. The target date for completion of the rewiring of both Christmas and Cocos (Keeling) Islands was June 1999. Telstra expected to meet that deadline. The upgrade targeted around 90 strategic customers, including schools and major business services. It provided them with directly wired connections, resulting in significant improvement in data and voice services. It installed a new Ericsson RSS exchange and five new Alcatel remote access units. There would be 1200 customers connected to the new facilities by May 1999.[46]

4.34   For the Island the disadvantage of the completion of the task was that the analogue mobile phone system would be phased out. Telstra explained that it was only meant to be an interim arrangement while the re-cabling was carried out. It would be removed by the end of 1999 along with the analogue mobile system in the rest of Australia. It would not be replaced by a digital mobile system which, according to Telstra, would not be cost effective due to the small number of subscribers on the Islands.[47]

4.35   The Committee considered that the approach taken by Telstra to upgrade the Indian Ocean Territory telecommunications facilities was reasonable. However, the Committee noted that they also utilised new Ericsson exchanges as part of the Telstra upgrades. Given the experiences faced by Norfolk Telecom with its new Ericsson exchange having to be replaced so soon after installation, the Committee was concerned that a similar fate did not befall the western islanders.

Customer service

4.36   Telstra claimed to have a representative visit the Islands every few months to speak to customers and consult with them.[48] Telstra undertook to provide a description of its public relations activities on the Islands, in response to questions from the Committee, but subsequently advised that there was no direct involvement.

4.37   The new Customer Service Guarantee provisions require Telstra to provide maximum connection times of either 40 working days or six months, depending on whether island customers are located near cabling or other infrastructure. The Australian Communications Authority (ACA) monitored Telstra's compliance with these standards. The ACA informed the Committee that in November/December 1998 they ran a Television campaign to inform customers of their rights under the customer service guarantee. On the other hand the Telecommunications Industry Ombudsman claimed to have no familiarity with the provision of carriage services on

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45   Department of Communications, Information Technology and the Arts, *Submissions,* p. S194.

46   Telstra, *Submissions,* p. S209

47   Department of Transport and Regional Services, *Submissions,* p. S266.

48   Telstra, *Transcripts*, p. 35.

either Christmas or the Cocos Islands.[49] This was hardly reassuring to consumers on either of the External Territories in terms of practical arrangements for hearing complaints.

4.38   Nevertheless Telstra was able to inform the Committee of its complains statistics for the Indian Ocean Territories. Since 1996 there had been 25 formal complaints/inquiries from Christmas Island and six from the Cocos (Keeling) Islands. The complaints related in the main to billing but also included advertising, payments, performance and service reliability.

Table 4.2   Customer complaints to Telstra 1996-98

	CHRISTMAS ISLAND		**COCOS (KEELING) ISLANDS**	
1996	6	4 billing	2	1 billing
1997	13	7 billing	3	2 billing
1998	6	2 billing	1	1 billing
TOTAL	**25**	**13**	**6**	**4**

Source: Telstra, *Submissions,* p. S229.

Multi-media and the Internet

4.39   More than any other communications service, the availability of the Internet to the External Territories was seen as a benchmark of the territories' comparability with the rest of Australia. It was also the area that was at once most complex to address and yet potentially most beneficial in overcoming the tyranny of distance. Witnesses before the inquiry believed that it could fill in gaps in health and education services and create or enhance business opportunities by facilitating banking, business contacts and orders. It could obviate the natural difficulties and costs associated with sea and air transport and hence the postal services.

4.40   It is not currently used widely; it is both slow and expensive.

Current Internet services and costs

4.41   A locally based Internet Service Provider, IOCOMM Technologies Pty Ltd. served customers by operating a Telstra Dedicated Data Service via satellite at 64 kbps from its premises to the mainland network. The annual cost of the Telstra line to IOCOMM was $56,000, an expensive proposition for the ISP when the pool of

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49   Telecommunications Industry Ombudsman, *Submissions*, p. S126A.

customers on the island was so small. The ISP believed these costs to be twice those on the mainland and the lack of carrier competition did not encourage lower prices.[50]

4.42   According to Telstra, the few customers with a cabled service who subscribed to IOCOMM, could achieve data transfer rates comparable to those available on the mainland and yet pay only a local call fee in addition to the ISP charges. IOCOMM believed they had about half the customers they needed to cover costs and about half the customers for which their 64kbps line could cater – 75 of 160.[51]   In February 1999, the ISP customers included the Christmas Island Administration.[52] IOCOMM noted however that the 64kbps speed that they had to the mainland was not replicated on the island because of limitations in the copper lines.[53] The Department of Transport and Regional Services said that the new cabling would offer businesses and people with a modem a speed of 33.6kbps within the Island.[54]

4.43   Other customers on the fixed AMPS network were limited to data speeds of 2.4 kbps.[55] This was really too slow for adequate access of the Internet. Telstra claimed that speeds would be uniformly 9.6kbps between the Islands and the mainland by the middle of 1999 with the completion of the recabling of the island and the installation of a new exchange.[56] This is not a marked improvement in Internet capability. Telstra explained that ISDN capacity (64kbps) is not currently available on the islands and will not be generally available even after the recabling in 1999 because of deficiencies in the satellite link to the mainland. IOCOMM explained the limitations in speed being the result of the 'voice circuit channeling through the satellite link [which] uses compression techniques to suit voice only [and this] effectively limits the data speeds to 9.6kbps'.[57]   'A suitable space segment that provides a satellite footprint that covers the dispersed External Territories must also be found.'[58].

4.44   One possibility was the provision of a VSAT[59]. According to the ISP, the cost of a VSAT capable of providing suitable satellite capacity would be in the order of $70,000. It appeared to the Committee that establishment costs might be found in the RTIF if and when an allocation is made to the External Territories under that fund.

50   IOCOMM, *Submissions, p. S296.*

51   IOCOMM, *Transcripts,* p. 291 and *Submissions,* p. S295.

52   Department of Transport and Regional Services, *Submissions,* p. S266.

53   IOCOMM, *Transcripts,* p. 287.

54   Department of Transport and Regional Services, *Submissions,* p. S266.

55   Telstra, *Transcripts*, p. 24.

56   IOCOMM, *Transcripts,* p. 287.

57   IOCOMM, *Submissions,* p. S294.

58   Telstra, *Submissions,* p. S101.

59   Very Small Aperture Terminals. Small software–driven earth stations used for the transmission of data, video or voice via satellite. A VSAT is located at the end–user location. It comprises two units: one outdoors for a line–of–site to the satellite, and one indoors to interface with the user's equipment (such as data terminal equipment). VSAT systems are capable of supporting downstream rates of 512 kbps.

4.45   Currently cabled customers also had the option of accessing a mainland ISP such as Telstra's own ISP 'Big Pond'. They could achieve data rates of 9.6 kbps but incurred STD call charges. However, between 7pm and midnight, the maximum Telstra or OPTUS STD call cost was $3.[60] Other special STD rates also applied for various periods like weekends.

4.46   The local ISP was also investigating an alternative data link provider on an Asian satellite.[61]

4.47   Technical support and repairs on Christmas Island were also a problem. Equipment and models were often old and diverse and freight cost made the acquisition of parts expensive. [62]

Internet training

4.48   The viability of the Internet on the Island is in part a function of the confidence of the local population in using the system. This problem is a circular one. If the general commercial attractiveness of remote parts of Australia can be multiplied by information technology, somehow this circle of problems has to be broken. Future prosperity in education and health and the development of employment opportunities must be enhanced by the expansion of Internet services. The Committee was told that the Christmas Island community's knowledge of Internet services was not great and the number of computers was not high. Without greater demand, the adult training organisation on the Island has not planned Internet training courses. In turn, demand for training is further curtailed by the lack of understanding of the Internet's usefulness and capabilities. The economic volatility of the Island's commercial enterprises and the lack of government commitment to using the ISP have further reduced demand and the viability of the only provider.[63]

4.49   There is a project application currently seeking funds under the Regional Telecommunications Infrastructure Fund for the establishment of a Tele-centre on Christmas Island. This centre is envisages offering the services of tele-medicine, Internet access, vocational and tertiary education, special school based education, business enterprise activities and Commonwealth Centrelink services.[64]

Education and the Internet

4.50   The Christmas Island High School caters for 520 students from kindergarten to year 10. Students wishing to complete years 11 and 12 must go to the mainland. Eighty per cent of the students are of Asian background and the school is classified as an English as a Second Language (ESL) school.

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60   Telstra, *Submissions*, p. S100.

61   IOCOMM, *Submissions,* p. S295.

62   IOCOMM, *Submissions,* pp. S295-S296.

63   IOCOMM, *Submissions,* p. S297.

64   Indian Ocean Group Training Association, *Submission,* p. S255.

4.51   Computer links allow remote schools to access programs and specialist courses that would otherwise be unavailable; they extend and enrich the curriculum. In Western Australia, the Department of Education offers telematics as a computer based education service throughout the state. The Christmas Island District High School lamented the poor communications quality and reliability provided by satellite.[65] While it had a purpose built computer network within the school, it could not access mainland educational programs due to the slow data rate, high costs and disjunction between the technical systems available.

> The school has a connection, but it is only one dial-in line and it is limited to 26.4k. That is on a network of 100 computers. … You can imagine how slow it is.[66]

4.52   The computer network in the school operated as an Intranet. It had value for training students in general computer use but did not offer efficient access to the Internet or the educational programs or the departmental in-service programs directed at teachers.

4.53   In the last two years all students who completed year 10 have sought to go on to years 11 and 12. There were 44 students in 1998 who will attend 16 different schools in Perth. The need for year 11 and 12 students to go to Perth is an expensive and complex operation for people in the territories. The Principal of the school explained the process to the Committee:

> … we arrange case conferences which is a meeting with each family member with our school psychologist and teachers at the school. At that we sit down to plan the course. We look at what their work and their results have been at the school with a view to saying, 'This would be a reasonable course for you to access on the mainland.' These students will go down in weeks 9 and 10 of this term for an experiential visit, and we get funding for this. They are enrolled at the school for February next year. When they go down in September, they are given a buddy teacher, a mentor, and the course is discussed with them. While they are there they actually catch the bus and go to the location where they are going to live so that when they go down in February, they know, 'I get off at No. 3 stop on bus No. 20. This is the teacher I am going to meet on the Monday.[67]

4.54   While it is unlikely that the Internet will provide a comprehensive alternative to the need for these students to move to Perth to complete their schooling, some course possibilities may develop as the educational services on line expand. This matter was broached in more detail at the hearing on Cocos Island. (See Chapter 6.)

4.55   Teachers from Christmas Island have in-service training by going to Perth. This cost $91,000 per year for 40 staff, a cost that is mainly a transport provision.

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65   Christmas Island District High School, *Submissions*, p. S20.

66   IOCOMM, *Transcripts,* p. 288.

67   Christmas Island District High School, *Transcripts,* p. 310.

Professional material such as teachers' journals comes by sea mail with a time lag of eight weeks.[68]

4.56   Schools in Western Australia also use computer systems and links back to the Department of Education to run their administration. They access financial and human resources packages on line. With the current inadequacy of computer linkages between the Island and the mainland, this facility is not available to the high school; documentation must be processed in hard copy, although there is a recently acquired limited access to email.[69]

Health services and the Internet

4.57   The hospital on Christmas Island is an eight bed hospital. It has an emergency/outpatients department, a theatre, a birthing suite, four consulting rooms, other ancillary rooms and a dentist. Specialist doctors – physicians, paediatricians, a gynaecologist and an opthamologist - visit regularly. Their visits each cost $7,000 plus airfares and accommodation.

4.58   The problems associated with the hospital on Christmas Island are generically the same as those of the hospital on Norfolk Island, only exacerbated by the markedly less frequent flights. Equipment that needs repair or replacement, blood products and medicines, X-rays and employment contracts can be held up for anything from days to weeks. As on Norfolk Island, there is a particular problem with X-rays.   Because of the weekly flights, the assessment of the X-rays of bone breakages, for example, can take up to 10 days. 'If someone breaks a bone on Sunday, we will not know until Tuesday or Wednesday week whether what we are doing is up to scratch.'[70]   The cost of an emergency evacuation to Perth is $28,000 (Royal Flying Doctor Service) to $54,000 and of a standard evacuation is $1500 for the patient.[71] Any accompanying personnel are an extra cost.

4.59   Doctors in remote communities are of their nature generalists; they do not nor cannot specialise in every area of medicine. Tele-medicine offers the opportunity to download X-rays and ECGs, to video-conference specialist advice, to provide on the spot psychiatric treatment to patients.

4.60   Costs associated with tele-medicine quoted to the Committee included the $50,000 to $70,000 per year for the access to the satellite, $20,000 for the X-ray facilities plus additional unspecified costs.[72]

4.61   Both the doctors on the Islands and the Department of Transport and Regional Services expressed interest in the development of tele-medicine on the Islands. The Department is interested in 'anything that might cut down the need for

68   Christmas Island District High School, *Transcripts,* p 309.

69   Christmas Island District High School, *Transcripts,* p 309.

70   Indian Ocean Territory Health Service, *Transcripts,,* p. 294.

71   Indian Ocean Territory Health Service, *Transcripts,,* p. 296.

72   Indian Ocean Territory Health Service, *Transcripts,* p. 297.

medivacs'.[73]   However, the primary discussions on the possibility of tele-medicine services have been taking place between the doctors and nurses on the islands and the Western Australia Health Department, which under the existing service delivery arrangements has responsibility for the delivery of health services to the Indian Ocean Territories.[74]

Government Internet requirements

4.62   The Department of the Environment and Heritage noted that the Administration did not have Internet access and appeared hesitant to obtain access due to the cost.[75] The Department's office used 'Big Pond' which is expensive because of the slow rate of data transfer. Access to the system is awkward as it is not located in the Department's own offices but in the Administration's office. As with the mine, the scientists found the transfer of documents – contracts, maps, plans, colour photographs and slides - without electronic transfer cumbersome. The lack of an Internet capacity meant that attachments to email could not be accessed.[76]

4.63   In its submission, the Australian Federal Police (AFP) complained of the prohibitive cost of obtaining permanent telecommunications connection with the mainland. The AFP required the line to handle e-mail, data transfer and tele-conferences for matters of customs, immigration and legal cases. A Telstra quote for service suggested a 64 kbps line would cost $110,00 and $55,000 for the annual rental charge. This cost was well beyond the AFP's allowance.[77] A copy of the actual quotation, as provided later, clarified the figures. It indicated an installation cost[78] of $53,000, which when combined with the first year annual rental charge of $56,000 gave a total cost for the first year of $109,000.[79] According to the quotation, subsequent annual charges were to be $56,000. At the hearings, Telstra undertook to determine the applicable rates for line connections. Telstra's table of charges suggests that the annual rental for 64kbps from Canberra to Christmas Island would be $90,000, considerably more than quoted to the AFP although the installation costs in the Telstra table are much lower at $5,000 - $6, 000. OPTUS also undertook to investigate the issue.[80] (See Antarctic Territories, Chapter 6.)

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73   Department of Transport and Regional Services, *Transcripts,* p. 11.

74   Department of Transport and Regional Services, *Transcripts,* p. 11.

75   Department of the Environment and Heritage, *Submissions*, p. S164.

76   Department of the Environment and Heritage, *Submissions,* p. S165.

77   AFP, *Submissions*, p. S71.

78   A large part of the quotation was for switching (multiplexing) equipment and a line on the Island.

79   Telstra, *Submissions,* p. S230.

80   OPTUS, *Transcripts*, p. 45.

Table 4.3   Telstra Quotation: 64 kbps lines between different location pairs

LOCATION	ANNUAL RENTAL	INSTALLATION
Broome to Perth	$34,692	$3,500
Cocos to Perth	$56,000	$5,500*
Broome to Canberra	$34,692	$3,500
Cocos to Canberra	$90,000	$5,500*
Christmas to Perth	$56,000	$5,500*
Christmas to Canberra	$90,000	$5,500*
Canberra to Perth	$33,100	$3,500

* Costs should be considered as approximate only.
Source: Telstra, *Submissions*, p. S230

4.64   Other agencies, such as the Supervising Scientist Group's report commented on the poor Island telephone systems, low satellite capacity and costs of STD calls.[81]

Private business Internet needs

4.65   The Christmas Island Phosphates Company noted that its need for high-speed data lines, broadband services and video-conferences were not met by the existing service.[82]   Christmas Island Phosphates sought a 1750 kbps link for Internet usage whereas it only had 64 kbps at present.[83]   The Company suggested that 128 kbps was a minimum for video-conference tasks. It had offices in Singapore and Perth that required timely information on shipment prices, dates, composition, quantities, and product information as well as needing to undertake commercial transactions. It was a matter of competitiveness. Representatives believed that 'within a couple of years nearly all transactions would be carried out through the Internet, whether it is organising shipping, organising marketing or organising the paying of all your accounts'.[84]   At present the Company found that even using services offered locally by banks for the input of payroll data, while possible, was inadequate because of the maximum speed available of 9.6kbps.

4.66   Company plans and drawings and technical literature still had to be sent by mail with all the delays inherent in a postal system that is reliant on an airline service with inadequate capacity.

> Until we get a reliable data transmission of this type of information, we
> are relying on the postal service, and it fails time and time again which

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81   Department of the Environment and Heritage, *Submissions*, p. S165.

82   Christmas Island Phosphates, *Submissions*, p. S9.

83   Christmas Island Phosphates, *Submissions*, p. S9.

84   Christmas Island Phosphates, *Transcripts,* p. 316.

> causes delay in projects, which is an added cost to the company. We still rely on the postal service a lot. It lets us down. It is costing us money.[85]

4.67   The Committee understood that the, then closed, Resort-Casino also had major telecommunications requirements in order to attract and process tourists from Asia to the hotel-gaming complex. The closure of the Casino has removed a major island customer for Internet supplies to the detriment of the ISP supplier and therefore to all other potential customers.

4.68   The Department of Transport and Regional Services noted the possible major impact on telecommunications services stemming from the proposed space satellite launch centre on Christmas Island.[86] This Asia Pacific Space Centre would require significantly enhanced telecommunications infrastructure to provide surveillance and tracking radar, telemetry, plus data and voice transmission and receiving systems for site and launch communications, together with links to ground stations and other centres.[87] The project might also require facilities for 1000 additional construction workers and the normal operational requirements of a Russian rocket launching facility with 400 staff. The Committee thought that future monitoring was essential.

The Universal Service Obligation

4.69   The Australian Communications Authority (ACA) has declared both Christmas and Cocos Islands as net cost areas so that the USO provider, Telstra, may lodge a claim for the loss incurred in supplying the USO to them. During the hearings, Telstra costed its 1995-96 USO at about $600,000 for Christmas Island and $300,000 for the Cocos Islands in net cash outlay.[88] This amount roughly equated to the cost of providing a satellite spot beam for broadcasting, as mentioned in chapter 7 and paragraph 5.19 above. It may be useful for the Government to consider the comparative costs of subsidising Telstra for the USO and the cost of the provision of a special satellite spot beam to service the Indian Ocean Territories.

Recommendation (6)

The Committee recommends that the Department of Transport and Regional Services and Australia Post guarantee that a minimum of one return airmail service per week be available. (4.9 – 4.18)

Recommendation (7)

The Committee recommends that Australia Post ensure that Express Post parcels are given the same standard of delivery as remote areas on the mainland. (4.10)

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85   Christmas Islands Phosphates, *Transcripts,* p. 316.

86   Department of Transport and Regional Services, *Transcripts*, p. 174.

87   Exhibit No. 10, Department of Industry, Science and Technology, *Asia Pacific Space Centre Pty Ltd – Proposal to establish a Spaceport on Christmas Island,* July 1998, p.1.

88   Telstra, *Transcripts*, pp. 39-40.

Recommendation (8)

The Committee recommends that the Department of Communications, the Information Economy and the Arts ensure that all External Territories have access to toll-free numbers, call-centre operator services and other such regular, on-line, mainland business services. (4.31)