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Information communication technology

Introduction

5.1 Affordable, reliable and modern information communication technology (ICT) is crucial for the provision of private and public sector services for the Indian Ocean Territories (IOTs). ICT includes those technologies which assist with digital and electronic communication such as: internet services, digital television, radio services and telecommunications. Improved ICT facilitates business development, assists with essential service delivery and provides connection with the mainland, which helps to mitigate the effects of geographic isolation.

5.2 There are two main options for improving communications for the IOTs: upgrading the existing satellite link and laying cable or creating a branching unit and spur from a new cable.

5.3 This chapter discusses the telecommunications and ICT requirements of the IOTs and options to improve current service provision.

Internet services

5.4 The community based and member owned company – Christmas Island Internet Administration Limited (CiiA) is the only private sector Internet Service Provider (ISP) for the IOTs. CiiA provides both a wireless broadband internet service and a dial-up internet service. CiiA also provides a GSM[1] mobile telephone network on the Cocos (Keeling)

1 Global system for mobile communications

Islands.[2] However, the mobile service provided on the Cocos (Keeling) Islands is subject to limited range and regular failure on West Island. On Home Island, the mobile network has been unavailable for over a year, due to an inability to source relevant parts.[3]

5.5 In addition to the private delivery of internet services, Government agencies such as the Attorney-General's Department (AGD) and the Department of Immigration and Citizenship provide their own internet service network.

5.6 The Government has recently approved $11.3 million for a 'whole-of-government fibre optic solution for Christmas Island to connect the seven key Australian Government agencies located on Christmas Island.'

5.7 The Government has recognised the importance of improving internet services nationally and has implemented the Australian Broadband Guarantee (ABG) as a result. The ABG is aimed at assisting 'residential and small business premises access a metro-comparable broadband service.' The program is designed to target 'premises unable to access commercial metro-comparable services, particularly those living in remote parts of Australia.'[4]

5.8 Through the ABG, the Government 'subsidises the provision of metro-comparable services where such services are not available commercially including those premises which fall outside coverage of the National Broadband Network.'[5]

5.9 ABG defines a metro-comparable broadband service as 'any service that offers a minimum 512kbps download and 128kbps upload data speed, 3GB per month data usage at a total cost of $2500 GST inclusive over three years (including installation and connection fees).'[6]

5.10 The IOTs has access to communications services (including internet) through a satellite link. Provision of communication services for the IOTs is more expensive than the provision of similar services on the mainland. Satellite connections can also 'experience signal delays in transmission, or

2 Christmas Island Internet Administration, *Submission 8*, p. 1.

3 Shire of Cocos (Keeling) Islands, Mrs Melinda Lymon, *Transcript T5,* pp 12-13.

4 Department of Broadband, Communications and the Digital Economy, Australian Broadband Guarantee, viewed 22 December 2009, < www.dbcde.gov.au>.

5 Attorney-General's Department, *Submission 15*, p. 12.

6 Department of Broadband, Communications and the Digital Economy, Australian Broadband Guarantee, viewed 22 December 2009, <www.dbcde.gov.au>.

latency, which impact on the response time for internet and … limit functionality for some applications.'[7]

5.11 Options to improve internet services include an upgrade of the satellite link or laying and accessing cable.

Standard of internet service delivery

Christmas Island

5.12 Under the ABG, services offered by CiiA are considered to be metro-comparable and so its subscribers are not eligible to receive a subsidised service.[8]

5.13 However, CiiA stated the metro-comparable service it operates is 'less than what most Australians can access in metropolitan areas on the mainland. CiiA advised that 'this has been a source of confusion and frustration for many subscribers, especially new arrivals, as they expect the same quality of service on Christmas Island as they had on the mainland.'[9]

5.14 In regard to its ineligibility to receive subsidy under the ABG, CiiA stated:

> We applied for the ABG program and jumped through all the hoops but we were knocked back. This is one of the bizarre situations where, if we were not providing a metro-comparable service, essentially the Commonwealth would fund another provider to churn approach our clients. So we have the choice of basically delivering a metro-comparable service or not. We are quite happy, in other words, as far as the costs of deploying the technology required to deliver broadband is concerned, we can do that within our existing business model, but to improve the service or to deliver an enhanced service we cannot meet the recurring satellite cost.[10]

5.15 CiiA stated it is working towards providing better coverage and reliability of internet services to its subscribers with the upgrade of the point to point wireless backbone between wireless base stations and installation of a new tower to improve coverage. In addition, CiiA is working towards installation of a new satellite delivery system based out of the mainland.

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7 Attorney-General's Department, *Submission 15*, p. 12.

8 Attorney-General's Department, *Submission 15*, p. 12.

9 Christmas Island Internet Administration, *Submission 8*, p. 1.

10 Christmas Island Internet Administration, Mr Garth Miller, *Transcript T4*, p. 61.

With satellite base stations located on Christmas Island, the Cocos (Keeling) Islands and Perth, this would:

- 'enable CiiA to offer better performance to customer's through better bandwidth control
- enable larger entities to run their own private Wide Area Network link (eg. [Connection from the] local school directly [to] the Education Department)
- reduce latency to mainland Australia destinations by up to 40 percent.'[11]

5.16 The Shire of Christmas Island commented that Christmas Island's ability to compete commercially relies on improving communication services. The Shire of Christmas Island explained:

> … the future of Christmas Island will increasingly be determined by our ability to produce services and products that must utilise the most up to date communications systems. We will not be able to compete at home or abroad if we are not at the same level of speed and efficiency attainable in Perth, Jakarta or Broome. Our future will depend increasingly upon communications based businesses including research and education.[12]

5.17 Mr John Hibbard stated delivery of adequate bandwidth would improve the delivery of health and education services for the IOTs. In addition, without improvements in bandwidth, infrastructure improvements would not be worthwhile. Mr John Hibbard stated:

> With the trend to e-government and e-business, Christmas Island will be increasingly disenfranchised through substandard connectivity to the internet. Without improved links to the mainland, development of better telecommunications on the island is a waste of money as effective use of any enhanced infrastructure is effectively nullified.[13]

5.18 Taking into account the situation created if CiiA ceased its operations, the Department of Broadband, Communications and the Digital Economy (DBCDE) stated:

> If the Christmas Island Internet Association were to confirm its withdrawal from service provision, subject to funds availability,

11 Christmas Island Internet Administration, *Submission 8*, p. 2.

12 Shire of Christmas Island, *Submission 24*, p. 1.

13 Mr John Hibbard, *Submission 17*, p. 1.

> the ABG program could seek expressions of interest from providers registered under the program to provide services to these Territories. At least one provider has previously expressed interest in providing services under the ABG for these Territories, if there were no metro-comparable services being offered commercially.[14]

5.19 CiiA noted that there was virtually no interest from the private sector in providing ISP services to the IOTs and stated:

> There were some metro-comparable people approved that we had failed discussions with coming up here. But none of them seemed interested in retaining a full time presence on the island and none of them had any ideas for doing anything better, so we figured that there was not much point, truthfully. We would be quite happy, in other words, if some large provider that could access significant funding from the Commonwealth wanted to put in a next-G network or anything like that. If there is someone who has a better solution for the community, we would be quite happy to exit.[15]

Cocos (Keeling) Islands

5.20 The Shire of Cocos (Keeling) Islands advised that communications services on the Cocos (Keeling) Islands are inadequate and expensive and stated:

> Communications services to Cocos are similar to that received by most isolated mainland regions; however the continuity and speed of the service, particularly in regard to internet, telephone and mobile service leaves much to be desired.[16]

5.21 The Shire of Cocos (Keeling) Islands outlined the importance of adequate and efficient internet services in conducting business and for general use by the community. The Shire of Cocos (Keeling) Islands stated:

> The provision of a more efficient and effective internet connection is pivotal to many areas of business and to satisfy the needs of the community members. We can hope that the Indian Ocean Territories are considered somewhere in the Rudd Government's

14 Department of Broadband, Communications and the Digital Economy, *Submission 27*, p. 2.

15 Christmas Island Internet Administration, Mr Garth Miller, *Transcript T4*, p. 66.

16 Shire of Cocos (Keeling) Islands, *Submission 9*, p. 1.

> program to revolutionise Australia's telecommunications landscape with the rollout of the National Broadband Network.[17]

5.22 The Cocos (Keeling) Islands High School highlighted the need for having an adequate internet service and stated that it had all the relevant information technology equipment, but that it was still disadvantaged in accessing professional development online resources and in making contact with colleagues on the mainland. The Cocos (Keeling) High School stated:

> We are in line with the Department of Education and Training in Western Australia. They are in a process of putting out online teaching and learning strategies across the state, which requires broadband access to be used. It is not only online resources; it is professional development for staff and linking teachers up with other teachers in different areas. There is quite a huge program being rolled out. Unfortunately, on Cocos Island we have not been able to get involved in that because the straw that our internet comes through is just too small. So that is certainly an issue.[18]

Current cost of internet service delivery

5.23 The cost of providing internet services to the IOTs is higher than on the mainland. Higher costs are incurred because there are a low number of dispersed subscribers. In addition, high freight costs and shipping delays add costs to replacing parts and equipment.[19]

5.24 CiiA pays over $24 000 per month for satellite bandwidth and services 250 residential and 30 small business subscribers. Internet access for residential subscribers is priced at $69 per month and $225 per month for business subscribers. Under DBCDE guidelines, an ISP can charge its subscribers a maximum of $79 for similar services.[20]

5.25 CiiA stated it can not meet its satellite costs through its subscribers and so supplements its income through domain name sales. CiiA stated:

> Our costs are about $25,000 a month just for our satellite link, which is more than our total subscriber revenue—not even a covering of wages or the office. We supplement that income with revenue from domain name sales, so we get $22,000 a month from

17 Shire of Cocos (Keeling) Islands, *Transcript T5*, p. 2.

18 Ms Heather Prance, *Transcript T5*, p. 38.

19 Christmas Island Internet Administration, *Submission 8*, p. 2.

20 Christmas Island Internet Administration, *Submission 8*, p. 2.

> the company which runs .CC and we have $4,000 or $5,000 a month, so $600,000 or $700,000 a year is our total gross and about half of that comes from domain name and about half from running the ISP. Without that revenue, we would be insolvent.[21]

5.26 CiiA upgrades its internet service by purchasing additional bandwidth through the satellite delivery system with 'the cost of purchasing the bandwidth … the main constraint on improving the speed of broadband services.'[22]

Options for improving quality of internet service delivery

Satellite versus cable

5.27 CiiA advised there are two areas where broadband in the IOTs needed improvement: speed and internet capacity, and distribution. Improvements to internet capacity could be achieved through either upgrading satellite technology or laying and accessing cable. CiiA favoured an upgrade of the existing satellite technology to deliver improved broadband and stated:

> At this time the only way to bring bandwidth to the Territories is by satellite. Latency over satellite makes this relatively slow and expensive. Unless the Commonwealth wants to spend tens of millions [of dollars] running fibre [optic cable] to the Territories, satellite is the only option. Even if fibre [optic cables] were landed in the Territories, the local exchanges and copper networks would need to be upgraded to enable a [digital subscriber line] DSL - costing many millions [of dollars] more. …For the foreseeable future a satellite link to the mainland and wireless distribution in the Territories is the only sensible way to deliver broadband.[23]

5.28 CiiA commented that Government funding is required to assist with upgrading satellite technology for an improved internet service and stated:

> If we are looking at concrete things that the Commonwealth could do, we could bear the cost of putting people online. As to the recurring costs, the only mechanism that works in the short to medium term would be if the Attorney-General's Department,

21 Christmas Island Internet Administration, Mr Garth Miller, *Transcript T4,* p. 60.

22 Shire of Christmas Island, *Submission 24*, p. 1.

23 Christmas Island Internet Administration, *Submission 8*, p. 3.

> through some mechanism, essentially subsidised the link. Maybe the easiest way to do that—and we have had some early discussions with them—is if they purchase a link from us for redundant use which they would make available to the community if they did not need it. They seemed interested in doing that, on both Cocos and Christmas Islands. If we had a wish list, that would be on it. That is not possible to do until we have the infrastructure in place.[24]

5.29 The Christmas Island Chamber of Commerce (CICC) sponsored feasibility study on the comparison of cable and satellite technology outlined two possible options to improve Christmas Island's communications. The first and preferred option was to take a spur off the planned cable running from Jakarta to Perth and the second was to expand existing satellite services.[25]

5.30 According to the feasibility study, upgrading the satellite link was found to be more expensive compared to the cable option and could not deliver value on investment and further, would limit the scope for future development of services on Christmas Island. The feasibility study found:

> The alternative of using satellite to provide similar services has been examined and our analysis shows that it is substantially more expensive at a starting cost of $2.8M [million] per annum for a comparable offering. This produces an NPV[26] of $41M over the 15 year period. Even if we forego the health and education benefits, the NPV is still $20M. As the satellite alternative is both technically and economically inferior to the cable alternative, it will limit the scope for the development of internet, health, education and business services for Christmas Island.[27]

5.31 In regard to the cable option, Mr John Hibbard advised that Christmas Island could take advantage of a greater internet capacity at a cost of about 10 percent of a new cable, by investing in a branching unit and spur, similar to the method used by Papua New Guinea (PNG). Mr Hibbard explained:

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24 Christmas Island Internet Administration, Mr Garth Miller, *Transcript T4*, p. 62.

25 The Christmas Island Chamber of Commerce, *Submission 19*, p. 1.

26 Net present value is the difference between present value of cash inflows generated by the project and the amount of the initial investment. Shim J K and Siegel J G, 1995, *Dictionary of Economics*, John Wiley and Sons, Brisbane, p. 250.

27 Hibbard Consulting, July 2008, *Christmas Island's communications: A comparison of cable and satellite*, Hibbard Consulting, Westleigh, pp 1-2.

> Recent technological developments in the submarine cable field have produced a Branching Unit where a small amount of capacity can be picked off without affecting the mainstream traffic. Currently PNG is exploiting this where it is servicing its northern coast through an 80 km spur using such a branching unit. In doing so, it is getting relatively abundant capacity for a small fraction of the cost of a dedicated cable, something which would be outside its financial reach.[28]

5.32 Investing in a branching unit and spur would yield a capacity up to '10GBPS (or 4000 times the current 2.5Mbps of capacity servicing the island)', with a possible design life of 25 years. To be able to siphon off internet capacity from an existing cable would require a cable to be laid in the proximity of Christmas Island. In addition, 'there seems to be no great technical challenge' to provide a spur on an incremental basis.[29]

5.33 There 'are a number of proposals by private enterprise to lay a fibre optic cable between South East Asia and Western Australia' (WA) with the cost to include Christmas Island currently very prohibitive. However, the WA Government is seeking to develop partnerships which could reduce the cost of the cable option.[30]

The Gershon Report

5.34 In August 2008, Sir Peter Gershon delivered his review of the *Australian Government's use of information and communication technology* (the Gershon Report). The Gershon Report focused on 'the efficiency and effectiveness of the Australian Government's current use of ICT, to determine whether the Government is realising the greatest return from its investments in ICT, and to examine whether the right institutional arrangements are in place to maximise the return.'[31]

5.35 The Gershon Report makes recommendations to reform governance, capability, skills, data centres, ICT spending and the sustainability of ICT. These recommendations are to be implemented over a two year period, ending in June 2011.[32]

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28 Mr John Hibbard, *Submission 17*, p. 2.

29 Mr John Hibbard, *Submission 17*, p. 2.

30 Attorney-General's Department, *Submission 15*, p. 12.

31 Sir Peter Gershon, August 2008, *Review of the Australian Government's use of information and communication technology*, p. iii.

32 Sir Peter Gershon, August 2008, *Review of the Australian Government's use of information and communication technology*, pp 3-5.

5.36 Arising from recommended reforms in the Gershon Report, AGD stated it is looking at a whole-of-government solution for ICT services on Christmas Island. This includes the requirements of the school and hospital and the consideration of community needs.[33]

Conclusions

5.37 Internet services in the Indian Ocean Territories (IOTs) are currently provided through the Christmas Island Internet Administration Limited (CiiA). These internet services though classified as metro-comparable under the Government's Australian Broadband Guarantee (ABG), are not adequate to support a high level of economic growth and meet the requirements of modern service delivery.

5.38 CiiA is the sole Internet Service Provider (ISP) for the IOTs. CiiA advised it incurs high operating costs as it services a small, dispersed population, is limited in how much it can charge for its services and so can not recoup the costs of its operations through its subscribers.

5.39 If CiiA were to cease its operations, the Department of Broadband, Communications and the Digital Economy advised the committee it would seek to replace the ISP by seeking expressions of interest from ISPs registered under the ABG program. However, CiiA informed the committee that there appears to be no remaining interest from ISPs for the provision of internet services to the IOTs.

5.40 Taking into account the limited interest from ISPs in the current IOTs communications market, the possible costs involved in seeking expressions of interest and any problems which may be experienced in the transition of ISPs (if a replacement were found), the committee believes the Government should reconsider its approach under the ABG and provide funding for the current IOTs ISP.

5.41 A reliant, efficient and affordable internet service is required for the IOTs to: assist with improving communications, assist business operation and development, and improve the standard of essential service delivery in areas such as health and education.

5.42 The committee heard there are two options available to improve internet capability: upgrading satellite capacity, and laying or accessing cable.

5.43 The Christmas Island Chamber of Commerce sponsored feasibility study found that the cable option provides greater value for money than the

33 Attorney-General's Department, *Submission 15.3*, Question 1.

upgrade of satellite technology. In addition, public-private partnerships could assist in lessening the costs of laying and accessing cable for the IOTs.

5.44 However, it is not possible to take advantage of the cable option in the immediate future as cables have not yet been laid in the proximity of the IOTs and time lags associated with taking up the cable option have not been considered.

5.45 As communication requirements in the IOTs need to be urgently addressed, upgrading satellite technology could be a more efficient and cost effective option in the short term. The cable option could be considered as the IOTs communication needs develop into the longer term. Enhanced satellite communications could assist the current ISP to provide an improved internet service for the IOTs until access to cable could occur.

5.46 The committee believes that improvements to internet capability are required as soon as possible to assist with economic development and service delivery. As the IOTs ISP is small and provides a vital community service, the committee suggests the Government subsidise the upgrade of existing satellite technologies servicing the IOTs.

5.47 In addition, the committee supports a whole-of-government approach to improving internet and communication services as specified by the Gershon Report.

Recommendation 20

5.48 **The committee recommends the Department of Broadband, Communications and the Digital Economy in consultation with the Attorney-General's Department review the operation of the Australian Broadband Guarantee as it applies to the Indian Ocean Territories.**

Recommendation 21

5.49 **The committee recommends the Government subsidise improvements to the satellite link for the Indian Ocean Territories to enable improved communication links with the mainland and to assist with business and service delivery.**

Mobile telephony services

5.50 Each of the IOTs has its own mobile telephone service. Telstra provides a GSM mobile telephone network for Christmas Island and CiiA provides a GSM mobile telephone network for the Cocos (Keeling) Islands.

5.51 Market competition for telecommunications infrastructure and services in the IOTs is limited because:

> … new providers may not view the Territories as an attractive commercial venture due to the remoteness, small consumer base and costs of infrastructure and service provision.[34]

5.52 Mobile telephone coverage on Christmas Island is limited to GSM access. The Telstra service provides for voice calls and SMS[35] messaging but excludes data transmission such as emails or images. Provided there is handset compatibility, visitors are able to access the mobile telephone service on Christmas Island through their existing phone company using international roaming.

5.53 The Shire of Christmas Island advised that current arrangements were agreed on between Telstra and the former Government when Telstra ceased its mobile telephone analogue network.[36]

5.54 The Shire of Christmas Island commented it would welcome a new arrangement that delivers an improved mobile telephony service similar to that in operation on the mainland. The Shire of Christmas Island asserted:

> …the Commonwealth is responsible for ensuring these services are provided to the Territories at the standards that apply on the mainland for broadband internet, digital television and mobile telephony.[37]

5.55 On the Cocos (Keeling) Islands, the GSM mobile telephone network is outdated and replacement parts are difficult to find. CiiA stated, the mobile telephone network on the Cocos (Keeling) Islands:

34 Attorney-General's Department, *Submission 15*, p. 11.

35 Short message service

36 Shire of Christmas Island, *Submission 24*, p. 3.

37 Shire of Christmas Island, *Submission 24*, p. 3.

> … is ten years old and an artefact of a dot com era project. The GSM system is on its last legs, the manufacturer no longer exists and the hardware is well passed its used by date.[38]

5.56 Mobile telephone coverage on the Cocos (Keeling) Islands is limited.[39] The telephone service on Home Island 'went-down' nearly a year ago and because of the difficulty experienced in sourcing spare parts has not been working since. The service on West Island is subject to limited range and regular failure. The Shire of Cocos (Keeling) Islands stated:

> The equipment is apparently very old and to get a spare part they have to source it from somewhere in the world. The Home Island service went down late last year and they have not been able to put it back into place because they cannot find the part that they need.[40]

5.57 The Shire of Cocos (Keeling) Islands also raised concerns about the impact on the reliability of its mobile telephone network on departure of the technician who services the mobile telephone network. There is a possibility the technician will not be replaced, creating a great cost in contracting-in this service on an ad hoc basis. The Shire of Cocos (Keeling) Islands stated:

> The relocation of the serviceperson from Cocos leaves the systems potentially unserviceable. This same technician has been maintaining and servicing communications and computer equipment and is possibly leaving the island at the end of 2009. Businesses on Cocos are not large enough to sustain the employment of a full time technician to set up networks, provide software and hardware support, and service and maintain equipment including printers and photocopiers. It would be a costly exercise for flights, accommodation and possible downtime to enable a person with the knowledge to visit Cocos on a periodical basis.[41]

5.58 DBCDE stated that where subscribers do not have coverage from a terrestrial mobile service, they may be eligible for the Satellite Phone Subsidy Scheme. To be eligible, applicants must live, work or operate a business in an area of Australia not served by a terrestrial mobile phone service, including Australia's external territories, air space and Exclusive

38 Christmas Island Internet Administration, *Submission 8*, p. 1.

39 Attorney-General's Department, *Submission 15*, p. 11.

40 Shire of Cocos (Keeling) Islands, Mrs Melinda Lymon, *Transcript T5,* p. 12.

41 Shire of Cocos (Keeling) Islands, Mrs Melinda Lymon, *Transcript T5,* p.3.

Economic Zone. For those parts of the Islands that do not have a working mobile phone service, residents would be eligible for a subsidy.[42]

Conclusions

5.59 There is limited competition in the Indian Ocean Territories (IOTs) telecommunications infrastructure and services market as the IOTs is a small and remote market, which has high infrastructure investment costs with limited returns.

5.60 Telstra provides a limited mobile telephone service to Christmas Island and the Christmas Island Internet Administration Limited (CiiA) provides, a now outdated and unreliable mobile telephone service to the Cocos (Keeling) Islands.

5.61 The mobile telephone service on Christmas Island offers only voice calls and text messaging. Other services such as email and image messaging are not available.

5.62 The mobile telephone service on the Cocos (Keeling) Islands has a limited range, is prone to regular failure on West Island, and is currently not working on Home Island. As replacement parts are increasingly difficult to source and the technician servicing the network is leaving the Islands and may not be replaced, it is evident the mobile telephone network on the Cocos (Keeling) Islands needs urgent replacement.

5.63 A partial or unreliable mobile telephone service acts as a disincentive for business to use that mode of communication to conduct business and further can create time lags and frustrate potential customers, limiting business development.

5.64 Both mobile telephone networks in operation on Christmas Island and the Cocos (Keeling) Islands also disadvantage visitors who not own either a Telstra mobile telephone or may not be able to access a mobile telephone on the Cocos (Keeling) Islands.

5.65 The committee believes the mobile telephone networks and required infrastructure on both Christmas Island and the Cocos (Keeling) Islands need to be upgraded urgently, in line with services available in most areas on the mainland, with the purpose of improving communication and assisting business operation and development.

5.66 In addition, as it appears unlikely the private sector will provide investment for limited returns to upgrade telecommunications on the

42 Department of Broadband, Communications and the Digital Economy, *Submission 27*, p. 1.

IOTs, the committee believes the Government should provide assistance for the provision of mobile telephone services.

5.67 The committee notes the Department of Broadband, Communications and the Digital Economy advised the IOTs could be eligible for the satellite telephone subsidy scheme. The committee believes the option to access funding under the satellite telephone subsidy scheme, to improve mobile telephone services on the IOTs should be explored.

Recommendation 22

5.68 **The committee recommends the Government provide assistance for the urgent upgrade of mobile telephony infrastructure and services on the Indian Ocean Territories in line with service standards available in metropolitan areas on the mainland.**

Radio services

5.69 Australian Broadcasting Corporation (ABC) radio services available to the IOTs via the Optus Remote Area Broadcast Service (RABS) are:

- ABC Radio National via Intelsat
- ABC Local Radio Northern WA
- ABC Local Radio Gold Fields (Kalgoorlie)
- ABC Classic FM
- ABC Triple J
- ABC News Radio.[43]

5.70 Radio Australia is the ABC's international radio and online service focusing on Asia and the pacific, with services provided in eight languages.[44]

5.71 Radio Australia is delivered to the IOTs via satellite instead of the more reliable short wave service as the IOTs are outside Radio Australia's short wave footprint.[45]

43 Australian Broadcasting Corporation, *Submission 32*, p. 1.

44 Australian Broadcasting Corporation, Radio Australia, viewed 27 January 2010, <www.radioaustralia.net.au>

5.72 Free, live online streaming of Radio Australia's radio services is also available depending on the online connectivity in the IOTs. No live sport is carried on Radio Australia's live online streams because of content rights issues. Even though Radio Australia's services are generally free to access, some sporting events are encrypted due to rights issues[46] and can not be accessed by free-to-air services in Australia.

5.73 The radio frequency used by regional ABC on Christmas Island is owned by the local radio station, VLU2 and shared with ABC regional radio, while Radio National, Red FM and Triple J each have their own frequencies.

5.74 Mr Kerry Walker was concerned that complete, live sporting coverage was unavailable via community radio on Christmas Island and advocated that a dedicated frequency be established for sporting coverage.
Mr Kerry Walker stated:

> …why can't ABC regional have its own dedicated frequency? I do believe that there is a place for community radio, and it goes very well on Christmas Island, but at peak times it clashes with my passion [sport]. Let us just stick with ABC regional, which covers sport. I cannot see why it cannot have a dedicated frequency.[47]

5.75 Mr Kerry Walker outlined his attempts at seeking a dedicated frequency for complete live sporting coverage and stated:

> I spoke to the then chairman of the radio here, which was Tony Smith. He gave me the address of the ABC general manager, whom I wrote to. He referred me to the island liaison officer. I … negotiated with him for 2½ years, until he moved on. That was the end of that. ABC WA said it has nothing to do with them. They are told what to do by the government and the [representative of] the government [is] the island liaison officer.[48]

5.76 The ABC advised that it does not intend to establish local transmission facilities on the IOTs as it would be difficult to support a remote transmission service without dedicated infrastructure and personnel located on the IOTs.[49]

45 Australian Broadcasting Corporation, *Submission 32*, p. 1.
46 Australian Broadcasting Corporation, *Submission 32*, p. 1.
47 Mr Kerry Walker, *Transcript T4,* p. 69.
48 Mr Kerry Walker, *Transcript T4,* p. 70.
49 Australian Broadcasting Corporation, *Submission 32*, p. 2.

5.77 However, the ABC stated it would fully support any Federal or State Government initiative to fund additional 'Self Help' transmitters and stated it would be 'pleased to provide technical assistance to the local authorities on establishing these services as it does in many remote areas of Australia.'[50]

5.78 The Australian Communications and Media Authority (ACMA) advised how a new community broadcasting licence to the residents of Christmas Island might be obtained and stated:

> First, spectrum may be made available for temporary periods, under section 34 of the *Broadcasting Services Act 1992* (the BSA) for temporary community broadcasting purposes. Second, provision for long-term community broadcasting services is made by varying the relevant Licence Area Plan (LAP) under section 26 of the BSA. Once a community broadcasting service is shown as available in a LAP, the ACMA may make available a long-term community broadcasting licence for allocation.
>
> The Christmas Island RA1 licence area in the Remote Western Australia Radio LAP makes spectrum available for one long-term community radio broadcasting service on Christmas Island. The licence for the 102.1 MHz and 105.3 MHz frequencies planned for a community broadcasting service is allocated to Christmas Island Community Radio Association Inc to serve the community interest of the general geographic area of Christmas Island. (The original licensee, Radio VLU2-FM Announcers Association Inc, changed its name to Christmas Island Community Radio Association Inc in September 2004.) During the process of renewing the licence in November 2007, the licensee indicated that it rebroadcasts the ABC Regional Radio service when there is no local programming. In 2007, the licensee indicated that it was broadcasting local programming for about 25 hours per week. There is currently no other spectrum planned for another community radio broadcasting service on Christmas Island.[51]

50 Australian Broadcasting Corporation, *Submission 32*, p. 2.

51 Australian Communications and Media Authority, *Submission 28*, p. 2.

Conclusions

5.79 Australian Broadcasting Corporation (ABC) broadcasts are available to the Indian Ocean Territories (IOTs) via satellite. VLU2 is Christmas Island's community frequency with programs shared with ABC regional radio, while Radio National, Red FM and Triple J all have their own frequencies.

5.80 Radio Australia is unable to provide a reliable short wave service to the IOTs because they are outside Radio Australia's short wave footprint. However, live online streaming of Radio Australia's radio services is available depending on the online connectivity in the islands. Unfortunately, no live sport is carried on Radio Australia's live online streams because of content rights issues and therefore residents cannot access some live broadcasts of sporting events as residents on the mainland can.

5.81 The ABC does not have plans to establish local transmission facilities on the IOTs and it would find it difficult to support a remote transmission service. However, the ABC would support any Federal or State Government initiative to fund additional 'self help' transmitters and provide technical assistance to the local authorities on establishing these services as it does in many remote areas on the mainland.

Recommendation 23

5.82 **The committee recommends the Government explore the possibility of funding 'self help' transmitters in the Indian Ocean Territories to enable live sporting events to be received.**

Digital television services

5.83 Under a rebroadcast licensing arrangement, the IOTs receive television in a digital format via satellite. This television signal is then retransmitted on an analogue network. Both Christmas Island and the Cocos (Keeling) Islands receive selected WA television channels.[52]

5.84 The switch over from analogue to digital television in the IOTs will occur between 1 July and 31 December 2013 unless, due to the need to upgrade

52 Attorney-General's Department, *Submission 15*, p. 12.

or replace the existing analogue broadcast equipment, it is decided to switch to digital transmission prior to 2013.[53]

5.85 The Government is pursuing discussions with broadcasters about the implementation of a satellite suite of digital free to air television services so that the IOTs may receive the same services which are available on the mainland.

5.86 In regard to the switch over from analogue to digital television, AGD advised it would engage in community consultation prior to switch over and stated:

> … the department retransmits television broadcasts in the territories as a community service. Analog television is due to be switched off by the end of 2013 and we are preparing to commence digital broadcasts before this time. We will again be engaging in some community consultation about how we will implement the change from analog to digital television.[54]

5.87 The Shire of Christmas Island advocated that television services offered on the mainland also be made available on the IOTs and stated:

> It is about standards. Is Christmas Island—and for that matter Cocos—to be treated the same as the rest of Australia? I was comforted by the idea that we are getting the digital signal off the satellite; it is just a matter of changing the distribution on the island.[55]

5.88 The Shire of Cocos (Keeling) Islands stated that the Cocos (Keeling) Islands receives two services. One service is for the standard four channels received in WA: WIN, ABC, SBS and GWN. The second service, transmitted to Home Island is for Malaysian and Indonesian television programs. A dedicated satellite dish has been provided by the Shire of Cocos (Keeling) Islands to residents of Home Island to enable Malaysian and Indonesian programs to be received.[56]

5.89 However, the dish is currently in poor condition and fees for its use have been waived as a result. However, it is anticipated that the Shire can repair or replace it in the very near future to avoid disruption to the important

53 Attorney-General's Department, *Submission 15*, p. 12.

54 Attorney-General's Department, Mr Julian Yates, *Transcript T1*, pp 3-4.

55 Shire of Christmas Island, Mr Gordon Thomson, *Transcript T4*, p. 5.

56 Shire of Cocos (Keeling) Islands, Mrs Melinda Lymon, *Transcript T4*, p. 5.

social and cultural service the Malaysian and Indonesian television programs provide.[57]

Conclusions

5.90 The switch over from analogue to digital television in the Indian Ocean Territories (IOTs) is due to occur between 31 July and 31 December 2013.

5.91 The IOTs currently receive television in a digital format from satellite which is then retransmitted through an analogue network. In addition to the programs received from Western Australia, Home Island on the Cocos (Keeling) Islands receives Malaysian and Indonesian television programs.

5.92 Evidence received suggests that current infrastructure to receive television signals could be upgraded to provide an improved service. The Attorney-General's Department (AGD) advised that if analogue infrastructure costs are higher than expected because of replacement or maintenance, then the switch over to digital television may occur sooner than 2013. The Shire of Cocos (Keeling) Islands also stated that it needed to repair the satellite dish it funds on Home Island.

5.93 The committee believes that by upgrading relevant infrastructure, the switch over to digital television for the IOTs could take place before 2013. The committee also understands and supports AGD's intention to undertake community consultation prior to the switchover from analogue television to digital television and highlights the importance of providing a television service for the IOTs which is comparable to that which is available on the mainland.

57 Shire of Cocos (Keeling) Islands, Mrs Melinda Lymon, *Transcript T4*, p. 6.