













ANNUAL REPORT 2013





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### AARNet National Intercapital Network





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### **AARNet International Network**

Please note this map is designed to be a conceptual representation of the international R&E Network



### A message from the chair

The rise of Asia — and the importance of the network



### Dear Shareholders

2013 marks my second term as Chair of the AARNet Board and it has been a privilege to witness at first hand, the immense economic impact that AARNet has had on research and education.





For almost 25 years AARNet has been delivering a world class network to enable research and education in Australia, to sustain our competitiveness in an increasingly global business. This year I want to give my perspective on one of the biggest economic changes in the world today – the rise of Asia - and its impact on research and education in Australia. This major realignment of economic, political and strategic power is at a speed and on a scale the world has not seen before.

While China and India dominate our network links, simply because of their sheer size and economic impact, the Asian region is filled with other rapidly emerging economies, the largest of which is our close neighbour Indonesia. Together with the advanced economies of Japan, South Korea and Singapore, this growth is clear evidence of our need to continually invest in our international network.

The world of research and education is changing and network connectivity will be at the very heart of enabling these changes. The international network will rise in importance, as the need to capitalise on collective research capabilities around the world becomes more pressing. This capability is vital for Australian research and education to flourish. New technologies are resulting in dramatic changes in the ways in which people live, learn, work, and discover. The rapid development of emerging economies around the globe is resulting in more individuals and organizations valuing education and relying on the outputs of research to underpin their growing economies and living standards. Network technology is making it increasingly easier to reach, and serve, the broader education communities. Our people, and core capabilities, provide a unique opportunity to play a lead role in this new globally connected era.

I would like to commend our CEO Mr Chris Hancock for his leadership role in the Global CEO Forum. National Research and Education Networks (NRENs) are swiftly moving to reinvent themselves in this global open exchange world - the concept of becoming Global Research Education Networks (GRENs) to meet the future demand for highperforming international data connectivity is imminent.

We are on the verge of an exciting new era for AARNet. We are uniquely positioned to serve a growing mix of customers. Today AARNet is a model business, an exemplar of academic/business partnership that has endured in the highly regulated world of telecommunications to become one of the world's leading NRENs. This presents both opportunities and challenges particularly in connecting to Asia. The upgrade in our network west to Singapore is key to delivering the research and education outcomes necessary for Australian economic prosperity and for Australia to remain connected to our international partners who together operate the world's most advanced networks.

This report is an update about our widespread engagement and the value that we are delivering to our shareholders. It showcases the international collaboration of our customers with Asia.

As Chair of the Board at AARNet I would like to thank my fellow Board Members, the CEO Mr Chris Hancock and the Management and Staff of AARNet for their professionalism and dedication. We are confident that we are creating great value for you and the other members of our community.

I wish to offer my sincere thanks to Mr Nigel Poole from CSIRO, who retired from the Board during the year 2013.

I have no doubt the future for AARNet is an exciting one.

White

Gerard Sutton AO Chair, AARNet Board



# A new era of Global Collaboration





### A message from the CEO

2013 was a remarkable year of achievement for AARNet and one that witnessed the delivery of new products, solutions and services that contributed significantly to the technology shift occurring across the Research and Education sectors in Australia. The use of the network again demonstrated the strong exponential demand for capacity from researchers, educators and administrators. Traffic grew by 50% from the previous year, with domestic traffic (traffic between customers) growing at a very healthy 58% and international on-net traffic at 39%. AARNet's traffic profile has changed significantly over the past few years with on-net now making up 67% of traffic and the unmetered off-peak traffic system providing substantial benefits to members outside the normal working day. Domestic peering also continues to be one of the most significant benefits to our customers and unmetered traffic now accounts for 85% of all traffic.

Overall, AARNet's network performance and delivery continued to operate at world-class standards with overall availability achieving 99.97%. The number of 10Gbps links to campuses grew to support the exponential growth of the sector. AARNet extended the AARNet backbone to 100Gbps capability and increased international capacity to the US across the research links on Southern Cross Cable Networks to 40Gbps until the year 2025.

Thanks to the Federal Government, on the infrastructure front, AARNet continued to grow its fibre footprint rolling out the National Research Network (NRN) Project, allowing AARNet to initiate fibre developments for metropolitan Brisbane, North Queensland, metropolitan Sydney, metropolitan Perth, and extending the Perth to Geraldton link, as well as allowing the upgrade of the AARNet optical backbone from Adelaide to Perth. AARNet strengthened its partnership with Nextgen by consolidating the connections for the five National Broadband Network (NBN) Regional Blackspots Program links, with implementation of the Brisbane to Darwin and Perth to Geraldton links. The degree of focus and delivery required by the AARNet team to achieve these infrastructure projects in the space of 12 months has been exceptional.

AARNet commenced the rollout of its 'above the network' services with several new products and solutions being deployed across the sector. During the year AARNet recognized the needs of its customers who have been demanding greater flexibility with focus on more low cost/low risk solutions. To this end. AARNet developed various cloud services with the introduction of the Box cloud collaboration platform to the Australian education marketplace and the extension of AARNet's large file sender service with the trial of CloudStor+ for all researchers across the country. In addition AARNet developed a hosted telephony solution and extended its video, streaming and recording services to further enhance the remote teaching and learning experience. The Unified Communications Exchange, which allows voice and video calls between universities in order to reduce costs and more efficiently connect researchers and educators between institutions seamlessly, continued to grow at an exponential rate. AARNet also established a new consulting arm, Enterprise Services, which has been highly beneficial to many universities in reviewing and providing advice on network architecture, cloud services, rich media collaboration services and enterprise IT strategy.

Our partnership with NBN Co continued to grow. AARNet has ensured its strategic positioning as the leader of networking developments in Australia with its ability to continue to showcase the network developments and applications that will be essential for the success of the future NBN. The financial headline indicators in the table below tell a story of growth and sustainability. Record growth in Internet traffic, innovation in product development and a disciplined investment strategy have all contributed to AARNet's continuing ability to reduce telecommunications charges in real terms to its members and customers.

Included in the 2013 Net Income are \$10.8m in NRN contributions, payroll tax recovery of \$1.1m and \$2.0m from gains on foreign exchange hedging investments. These items account for 50% of Net Income.

The NRN Project is an initiative of the Australian Government conducted as part of the Super Science Initiative and financed from the Education Investment Fund. AARNet uses this funding to extend and expand the reach of our network, greatly enhancing our ability to deliver services to our members and other customers. I would like to take this opportunity to thank the Department of Industry for their vision, funding and support for the NRN projects and Paul Sherlock at the University of South Australia for his outstanding management of this highly successful program.

The evolution of truly global science projects like the Large Hadron Collider and the Square Kilometre Array, the emergence of massive open online course programs (MOOCs), the development of campuses throughout the world, particularly in Asia, all require ongoing and expanded global leadership. AARNet has played an integral role in the past year along with the National Research Networks of China, US, Canada, UK, Germany, France, South America, New Zealand, Africa, Mexico and the Nordic countries in developing a shared global fabric for next generation networking. This group has developed detailed plans for several major initiatives that will ultimately strengthen innovation, stimulate global research, foster economic development, promote Internet freedoms and expand education across the globe.

Finally, I would like to thank our Chairman, Professor Gerard Sutton, and the AARNet Board, the AARNet Advisory Committee and CAUDIT for their support during what has been an outstanding year of deliverables by AARNet to the sector.

This was an amazing year of achievements for AARNet. Full credit goes to the dedicated staff who continually strive to deliver above and beyond to achieve the leading-edge outcomes that AARNet has become known for, both across the Research and Education communities and at the forefront of technology development in Australia.

Chris Hancock Chief Executive Officer

Selected Financial Data (\$m)	2004	2005	2006	2007	**2008	**2009	**2010	**2011	2012	2013
Net Assets	\$36.8	\$43.5	\$60.2	\$65.1	\$65.8	\$74.9	\$82.6	\$92.3	\$107.9	\$130.3
Net Income	\$11.2	\$6.6	*\$16.8	\$4.9	\$0.7	\$8.1	\$8.7	\$9.9	\$15.3	\$22.0
Net Tangible Assets	\$11.6	\$19.5	\$21.2	\$20.8	\$27.3	\$34.2	\$35.1	\$40.0	#\$52.0	##\$64.1
Cashflow from Operations	\$6.9	\$10.8	\$14.7	\$19.2	\$21.0	\$26.3	\$31.5	\$22.4	\$29.4	\$45.5

\*\$16.3m was earned during the year due to an IRU with Southern Cross Cable Networks \*\*The figures above have been restated to reflect the change in accounting policy. Refer to note 1(c) in the 2012 Financial Annual Report \* (net assets \$107.9m less intangible assets \$55.9m) \*\* (net assets \$130.3m less intangible assets \$66.2m)



### Eliminate Dengue: a Momentum of Partnerships

Monash University is leading an international collaboration project, Eliminate Dengue, in conjunction with key researchers from three other Australian universities including Professor Ary Hoffmann from the Bio21 Institute at Melbourne University, who has been a pioneer in dengue fever research.





20 years ago, geneticist Ary Hoffmann took a closer look at the humble fruit fly. He found that insects living in many kitchen fruit bowls carry bacteria, called Wolbachia, that live naturally inside their cells, and spread by manipulating the fly's reproduction. The bacteria also prevent the flies from passing a virus onto other fruit flies.

This research led Professor Hoffmann to try the same form of bacterial immunisation on the mosquito, the world's most important disease carrying insect.

Working with colleagues from Monash University and James Cook University Professor Hoffmann found certain strains of Wolbachia do stop mosquitos transmitting dengue, a disease that kills around 40,000 people each year with no vaccines or specific treatments currently available. There have been around 2400 cases of dengue infection in Northern Australia in recent years.

However, the bacteria causing the strongest blockage of dengue have been difficult to spread within the mosquito population because they reduce the mosquitoes' ability to lay viable eggs.

Professor Hoffmann has shown that by introducing an insecticide resistance gene alongside the Wolbachia bacteria into the mosquito the insects pass on the diseaseblocking bacteria to other mosquitoes much more effectively.

This could mean the spread of the disease can be stopped faster, and fewer infected mosquitoes would need to be released in a disease control program. Opposite page:

Aedes aegypti mosquitoes transmit dengue virus between people

> This page, clockwise from right:

The APAN workshop provided an opportunity to explore how NREN communities can combat Dengue Fever on a regional, national and global level; When Wolbachia is acrocent in badro approved

present in Aedes aegypti it stops dengue viruses from growing;

Eggs lined up for microinjection.



#### APAN hosts Dengue Fever Workshop

The recent Asia Pacific Advanced Networking (APAN) meeting, held in January in Bandung, Indonesia, hosted a dedicated Dengue Fever workshop in the programme for the established APAN Medical Working Group.

A joint APAN-TEIN\*CC initiative, the workshop took place on 20 January 2014, attracting over 30 attendees, including clinicians and researchers from within the multi-disciplinary dengue fever community, public health officials as well as National Research and Education Network (NREN) representatives from across the Asia-Pacific region including Dr. Sheryl Maher, from Charles Darwin University. Dr. Maher was able to utilise the network to participate remotely and represent the Australian consortiums' research.

The workshop also provided an opportunity to explore how NREN communities on a regional, national and global level can support the medical community's international collaborative efforts to combat dengue fever in endemic countries and to prevent its spread. AARNet enabled participants from Australia to join speakers from Pakistan, the Philippines, Bangladesh, Singapore, Sri Lanka, Malaysia and Japan to join discussions and view presentations in real time using multi-point videoconferencing system. Participants agreed to build on the positive experience of NREN supported videoconferencing and to follow up with virtual meetings. Professor Francis Lee Bu Sung, Chair of Governors of TEIN\*CC. said the event was very inspiring, and he hoped it would act as a catalyst for more joint actions.

Discussions are now underway with NRENs in other world regions about adapting this workshop model to the local context to help build regional communities to address pressing issues.





# International capacity underpins unmetered network access



Operational highlights

- AARNet4 one of the world's longest unregenerated highperformance optical networks
- 40Gbps on SXTransPORT to Seattle
- 10Gbps international commodity upgrades to Seattle, San Jose, Palo Alto and Los Angeles
- Domestic peering now accounts for 59% of all traffic
- Tasmanian Government Schools connect to AARNet
- New PoP site in Darwin
- EIF funding built dark fibre in nearly every state



# Managing the network is our primary function

Continuity in performance over such vast geographic distances can only be delivered by a well-architected network. Our operations group are our quiet achievers.

> The 24x7 Network Operations Centre (NOC) is the engine room of our organisation and this year AARNet extended the service into customers networks.

Network reliability again delivered 100% uptime over our own infrastructure and 99.97% in end to end performance. Faults and scheduled maintenance went unnoticed by the user community as a result of deploying alternate paths.

Even on our international legs, faults and scheduled maintenance in our PoP sites were invisible to the wider community. Our customers extended this reliability out to their campuses, commissioning us to build diverse paths into the network backbone.

AARNet operates a world class IP network, equivalent to international "Tier One" ISPs, where our customers receive 100% backbone network reliability with no service degradation during outages, planned or otherwise. Whilst there were no significant outages during the year, AARNet still conducted a number of disaster recovery exercises. This year we simulated a double intercapital fault, the failure of corporate systems and an optical node replacement as a result of natural disaster or vandalism.

One of the distinguishing features of a research and education network is the careful capacity planning necessary to remain ahead of the demand curve. AARNet closely monitors all of its circuits to ensure sufficient capacity. The peak demands of the academic year determine the capacity for a highly available and diverse network. AARNet continually monitors the load, as a percentage of the capacity of the link rather than the absolute volume of traffic to determine required network upgrades. This year international on-net traffic grew by 39% meaning Australian research and education is increasing its collaboration internationally and domestic peering now accounts for 59% of all traffic

10Gbps international commodity upgrades to Seattle, San Jose, Palo Alto and Los Angeles

International on-net meaning research and education traffic between our customers and their international partners grew by 39% over last year.

> Not all international research and education partners are connected to their NRENs, meaning their traffic must transit our commodity links rather than our research links on SXTransPORT. AARNet now has some 4 commercial grade PoPs in the USA. This delivers diversity and redundancy and allows AARNet to safely drive all circuits to maximum capacity.



## Telemedicine Networking continues to extend best practice through physical and digital space

AARNet continued to enable major Australian teaching hospitals to be part of the Telemedicine Development Centre of Asia (TEMDEC) telemedicine project, largely driven by Professor Shuji Shimizu; this project, running since 2002 enables remote training of surgeons, and the spread of best practice, by using research and education networks.







Australian researchers were able to utilise the network and participate in several programs over the course of the year. The University of Adelaide connected into an Endoscopy session with leading Japanese hospitals.

In January, the Westmead Millennium Institute for Medical Research was able to use the network to participate in a demonstration of measurement procedures on hepatic vein pressure. For the first time, hospitals from Bangladesh and Pakistan were able to connect in and participate.

The driving goal of TEMDEC is to make accessible world class health care, education and training accessible regardless of geographical or time zone constraints. As of February 2014 300 hospitals across 45 countries in the greater Asia-Pacific region are now connected participants.

Telemedicine continues to have wonderful support and growth; new connecting sites that have joined include the Fiji School of Medicine (FSM) at the University of the South Pacific in Oceania. Through collaboration with their endoscopic centre, TEMDEC hopes to strengthen this mutually beneficial relationship.

There's no doubt that medical practitioners and researchers demand the highest quality content delivery when it comes to being an engaged and active participant in a telemedicine session.



#### Below:

Remote viewers are able to see an endoscope image on one monitor, and an ultrasound image on another exactly as the surgeon sees it, whilst observing the particular technique being demonstrated.



#### **TEMDEC in Australia**

While the advanced capabilities of NRENs worldwide provide a sound basis for distributing vision of absolute clarity, the capture and broadcast of multiple diagnostically significant images from a range of instrumentation in itself is a challenge not for the faint hearted.

This challenge has been welcomed with open arms by James Bishop, Supervisor of Technical Services at the Clinical Skills Development Service, Royal Brisbane and Women's Hospital. James has engineered and technically directed the telemedicine sessions for two Endoscopic Ultrasound Symposiums from the Skills Centre enabling participation from professionals in Australia and throughout South East Asia.

"Unlike broadcast for TV, we have the liberty of distributing many video streams concurrently to multiple screens in multiple locations. A surgeon in theatre may wish to see an endoscope image on one monitor at full resolution, and an ultrasound image on the other also at full resolution. Remote viewers will need to see this exactly as the surgeon sees it, but may also want to see the particular technique being demonstrated by the surgeon as well. Rather than relying on the conventional picture-in-picture or cutting back and forth between several images, we can use the network to send all of these images at full HD resolution at the same time."

And on the managing of audio between so many locations and environments? "Don't get me started!!" he says. "Suffice it to say that while it's always juggle the result makes the effort worthwhile."

James' work demonstrates how harnessing the network adds a new dimension to medical teaching and learning methodology.



#### Rolling out AARNet4

AARNet4 is upgrading and building out the underlying optical transmission network to support up to 80 channels each of 100Gbps, as well as interconnecting the various inter-capital legs to allow more dynamic redundancy and provisioning of new services.

> It replaces the AARNet3 routed backbone with a distribution layer of 100Gbps-capable devices, capable of layer-2 and layer-3 VPN services in addition to the current routed Internet access. It is enabling the use of more economic customer equipment. The benefit of evolving towards the three-layered approach of AARNet4 is a higher speed optical backbone, with a distribution network allowing consequential regional switching and VPN functionalities, and a central Internet routing core.

This year we have completed the optical network from Adelaide to Perth and on to the Murchison Radio-Astronomy Observatory (MRO) in remote Western Australia. Spanning approximately 3500 kilometres this terrestrial network is capable of providing 80 channels each of 100Gbps and transmission speeds of up to 8 Terabits per second (Tbps). This was a feat of engineering with Cisco and AARNet's optical engineers working together to install equipment at some 30 repeater sites across remote and inhospitable terrain. On the East Coast we installed 100G transponders on our existing optical network to upgrade the Canberra to Sydney link to 100Gbps.

# Massive boost for international connectivity to the USA

In June AARNet completed the 40Gbps upgrade on the northern path of the SXTransPORT submarine optical fibre link connecting Sydney to Seattle.

> The partnership between AARNet and Southern Cross Cable Networks (SCCN) is now into its 10<sup>th</sup> year and plays a critical role in astronomy projects such as the Square Kilometre Array (SKA), and the Australian Square Kilometre Array Pathfinder (ASKAP) projects.

This upgrade boosts bandwidth from 10Gbps to 40Gbps, for 'big data' transport ahead of anticipated demand, and to ensure that Australia continues to play an integral role in major research programs, such as radio astronomy, climate modelling and high energy physics. AARNet customers are now benefitting from optimised international unmetered use of the network regularly achieving individual data streams of 7Gbps.

National Research and Education Networks (NRENs) are rapidly moving to reinvent themselves in this global open exchange world – the concept of becoming Global Research Networks (GRENs) to meet the future demand for high-performing international data connectivity is imminent.



# The Black Spots Fibre benefits Geraldton and Darwin

One of the most beneficial announcements from the Commonwealth Government was the RBBP or Blackspots Program announced in February 2009.

> The RBBP is separate to the NBN and AARNet has an IRU or services on all sections of the RBBP. One section Toowoomba, Darwin (some 2,500 kms) has given a quantum upgrade to 10Gbps for our NT customers, who now connect to our new commercial PoP in Darwin. Northern Territory schools now connect at 1Gbps making them some of the best regionally connected schools in Australia.

#### Building the last mile

The Education Investment Fund (EIF) allowed AARNet to build dark fibre in nearly every state. While the network design builds in diversity and redundancy across all elements of the backbone, the last mile will continue to be a significant undertaking for AARNet.

> We built fibre tails into the Sunshine Backbone in Queensland connecting customers from Brisbane to Cairns. We built three fibre rings; two in the Sydney Basin and one in Perth, replacing leased services with lifetime fibre to connect university campuses and countless fibre tails for schools, cultural institutions and medical research in just about every state of Australia.

In Victoria we built fibre to connect some nine schools in Kew.

As well, AARNet has collaborated with councils and with other carriers and utilities to build or swap fibre in order to connect customers in the most cost-effective manner and extend our reach to new areas. In all AARNet has built more than 50,000 pair kms of dark fibre generating a great asset of some 15 million pair kilometres of optical fibre Australia wide.

Our Infrastructure Development Team is a dedicated group of optical specialists enabling significant growth in our optical backbone and will be instrumental to the success of AARNet4.

# ...and many more 10Gbps customer connections

AARNet continued to replace and upgrade customer connections from 1Gbps to 10Gbps extending capacity and performance out to the network edge, facilitating the ever increasing bandwidth intensive applications.

Most large universities are now dual connected at 10Gbps and increasingly the regional universities such as Griffith University now connect at 10Gbps. AARNet connected its first school Scotch College at 10Gbps and many research customers such as DERM in Queensland.



## Asia ConneXions: Connecting Minds, Creating Futures

Five-year-olds who start school in Australia today will enter their adult lives at the time the Asian region will host the world's most influential economies. Preparing for a hyper connected Asian-centric world requires school age students to develop global competencies including knowledge and understanding of Asian societies, cultures, beliefs and environments, and the connections between the peoples of Asia, Australia and the rest of the world.







Asia ConneXions is a language and cultural exchange program led by the University of New England where schools in Australia and Asia partner to establish cultural and language exchange while fostering understanding between Australian and Asian students and teachers. The program provides participants with a very personal and experiential opportunity to learn about the diversity within and between the countries of the Asia region.

Asia ConneXions leverages high speed networks to connect Australian schools with schools in China, Korea and Japan via high definition video conferencing. The high quality low latency performance of the network is critical to the success of each engagement as students carefully attune to grammatical and gestural nuances in learning effective communication.

AARNet-connected schools are well positioned to use R&E infrastructure to participate in this program, with an increasing number joining for weekly or fortnightly video conferencing sessions with Asian schools.

Abbotsleigh, Pymble Ladies College and Knox Grammar School,NSW; Scotch College and Presbyterian Ladies College, WA; Calvin Christian School, TAS; Canberra Grammar School, ACT; and St Aidan's Anglican Girls School, QLD are among the AARNetconnected schools nationwide participating in the Asia ConneXions program. The Asia ConneXions program fostered a visit by a delegation of educators from Korea to Knox Grammar School. AARNet's Nick Cross, right, accompanied the visitors on their tour of the school.



Students studying Mandarin at Abbotsleigh, for example, conferenced with students in Hong Kong to practice speaking skills and learn about life in each other's countries.

"It's an authentic experience the girls are making real global connections. It's linking them to the real world."

NAOMI MANNING, ICT INTEGRATOR, ABBOTSLEIGH

Year 7 students at Knox, connected with students the same age at a school in South Korea. Over several sessions the students shared information with each other about national landmarks, interests and what they do in their spare time.

"We learnt so much about Korea — it was like going on an exchange without leaving the classroom." KNOX GRAMMAR SCHOOL YEAR 7 STUDENT The program also fostered a visit by the Korean Ministry of Education's Student Welfare Policy Division accompanied by twenty primary and secondary school teachers who visited Knox Grammar and St Aidan's Anglican Girls School to observe how Australian schools are using Information Communications Technology (ICT) for teaching and learning.



### Delivering Advanced Networking and Services on a Global Scale



Don Robertson Chief Operating Officer



# Global CEO Forum gathers momentum

The Global NREN CEO Forum held its third face-to-face meeting in Cape Town, South Africa on December 12<sup>th</sup> and 13<sup>th</sup> to review key global initiatives for adding value to the research and education community at the global level.

> The focus was on the practical implementation of a global network architecture, realtime communications, global services, and federated identity management. Two new areas of challenge were identified; security and mobility.

There was a great sense of community with the CEOs developing an NREN Action Team that will look at how established research and education networks can help developing NRENs, and how research collaborations, e.g. in health, that emerge can use the services of the R&E Networks effectively. Being in South Africa there was keen interest in how to best form and shape the dialogue between the Square Kilometer Array (and possibly other big science disciplines) and the network community. AARNet's Unified Communications Exchange (UCX) continues as an NREN global initiative

A service for AARNet customers to extend video calls beyond the enterprise to other participating AARNet connected customers was endorsed by the global NREN CEO's as one of the first product developments to be deployed globally.

> The AARNet UCX supports the full range of Unified Communications from high-end telepresence systems, through to room-based video conferencing, video phones, desktop video conferencing to mobile applications on Android and iOS. Early adopters, such as AIMS, CSIRO, ANU, Monash, Deakin, Swinburne, Victoria University and more, have enjoyed using the UCX for several years with some excellent results.

AARNet has direct SIP peering links to Internet2 in the USA for full immersive Telepresence systems and predominantly uses ENUM (E.164 Number Mapping) addressing protocols to route UCX calls. These protocols which are an extension of the Internet Domain Name System (DNS) are now being used by the National Research and Education Networks in over 30 countries around the world in Europe, Asia and the Americas.

# Eduroam's expanding footprint

Eduroam, the global secure roaming connectivity service for education and research, has seen improved global governance through the establishment of the Global Eduroam Governance Committee.

> Eduroam's footprint is increasing steadily in Australia. All except one Australian university participate in Eduroam AU and other research organisations including CSIRO, ANSTO, NICTA, AIMS and Intersect. NSW Health commenced participation in Eduroam AU during 2013, joining QLD Health and various other health institutions in other states and territories. AARNet's TAFE customers are also participating in Eduroam. As education and research users increase reliance on wireless connectivity, Eduroam usage continues to increase exponentially.

AARNet is actively involved in improving global Eduroam service delivery through its global collaboration. Standardising 'ancillary services' for global service delivery (e.g. services enabling operational deployment, monitoring, metrics and support) is a key goal of AARNet's Eduroam team.



### AUCX and G-RTC

#### QUESTNET 2013 Bill Efthimiou bill.efthimiou@earnet.edu.eu



Bill Efthimiou speaking on the AARNet UCX at the 2013 QUESTNet conference.

AARNet extends SXTransport capacity with Southern Cross Cable Networks.









SRI LANKA

# The world's largest research and education network connecting 55 million researchers; Australia to Asia – Asia to Europe



Around the 2<sup>nd</sup> century BC, the East and West were connected through the Silk Road. Civilizations evolved and the Silk Road enabled merchants from the East and West to trade and exchange their products. Two thousand years later, Asia and Europe are reconnected through the Trans-Eurasia Information Network (TEIN), with its noble goal of "Co-prosperity for Asia and Europe."

In 2010 the 8th Asia-Europe Meeting (ASEM8) Summit in Brussels, endorsed the 4th phase of the TEIN project and the establishment of the TEIN\*Cooperation Center (TEIN\*CC). TEIN is the world's largest research and education network providing dedicated high-capacity Internet connectivity for research and education communities across Asia-Pacific. Today the "Digital Silk Road" has over 55 million users in universities and research centres across China, India, Indonesia, Japan, Korea, Malaysia, Nepal, Pakistan, the Philippines, Singapore, Sri Lanka, Thailand, Vietnam, Australia, Bangladesh and most recently Cambodia.

Starting with a single circuit between France and Korea in 2001, TEIN now bridges the digital divide and tackles the challenges of earth observation, climate research, food security, delivery of e-health and e-learning. TEIN is a model collaboration overseen by Governors from the Member States and the peak body, the Steering Committee, elected by the Governors. The future for TEIN is in reinforcing unity among the regional research education networks and in expanding its global IT leadership to include the developing countries of the Asia Pacific.

AUSTRALIA





### Australian first for Box

AARNet can now provide Box's cloud content and collaboration management platform to all research and education institutions in Australia, via an Enterprise Customer Agreement customised for the Australian Research and Education sector.

> The Box service provides a simple, secure and scalable method for campuses to rapidly deploy Box's content sharing and collaboration service to their entire community; students, faculty and staff.

Box has been deployed widely across the higher education sector internationally and counts among its customers an impressive list of prestigious universities in the USA, including Stanford University, University of California – Berkley, Cornell University and Carnegie Mellon University.

Box and CloudStor lead our 'above the

network' services program

Box features will be customised for Australia's research and education sector; AARNet customers will be able to rapidly deploy Box services to their entire organisation and manage how content is distributed across multiple devices and shared between internal users and external collaborators. Box services will be integrated with university provisioning and security systems, and the Australian Access Federation.

Early adopters across the University, VET and K-12 sector are currently rolling out trials of the service, an important part of the evaluation process.

Research and education institutions are moving away from their legacy systems and instead seek technology that mimics what students have become accustomed to in their personal lives.

Box marries ease of use with enterpriseclass security and management features. Box for AARNet is being offered as part of AARNets 'above the network' services program to provide a choice of 'above the network' services customised to meet the needs of the AARNet community. The AARNet 'above the network' services program leverage the high capacity, high performance AARNet4 network.

#### CloudStor grows up into Cloudstor+

CloudStor, the web platform enabling researchers to transmit files too large to be sent using email, has grown into what can only be described as a phenomenon.

> The platform was introduced in June 2010 and was developed by a cooperative of NRENs from across the globe. In three short years 11,000 users have flocked to the service in Australia alone transferring files every hour of every day of the year. Last year, on average one file was transferred every five minutes.

These new users have brought with them many new ideas and AARNet, as part of the international community that developed the software on which CloudStor is based, has turned them into a reality.

Users wanted to ensure file integrity; in effect a digital "seal". We are working with Australia's peak measurement body, the National Measurement Institute, and the Australian Government's VANguard program to provide cryptographic time stamping and verification to do just that.

The user community also identified security as an issue. Most systems secure data by uploading an unencrypted file and encrypting it on the server, meaning the server must know the password, representing a security weakness. AARNet has employed encryption using the user's browser to provide the highest level of assurance. These features are now in beta with plans to bring them into production later in 2014.

During 2013, AARNet launched CloudStor+ "Personal Storage for Super Users" – providing 100 gigabytes of storage for individual researchers. The platform was integrated with the Australian Access Federation (AAF) and rolled out in Brisbane. Melbourne, and Perth. This unique geographic approach has achieved previously unseen transfer speeds to the researchers desktop. Over the past year, some 56 institutions have helped test the platform, entrusting the storage and transferring many terabytes of data to the service. With the help of our customers, we are now progressively rolling out CloudStor to researchers around the country.









The Australian Centre for International Agricultural Research (ACIAR) has, along with Dr Gary Kong from the Cooperative Research Centre for National Plant Biosecurity in collaboration with CSIRO and the Australian, Queensland and Thai departments of agriculture, put Australia at the forefront of technology-based biosecurity support with the development a remote microscope network.



This remote microscopy network has linked Thai quarantine officers to Australian experts in plant pests and diseases, dramatically increasing Thailand's capability to respond to potential or real incursions from across its borders. The success of this program has led to its expansion to other countries in the region, including Laos and Cambodia. Some national research highlights include improved production and profitability from central Vietnam's sandy soils, developments in the use of teak and paper mulberry in Laos, and identification of elite rice lines well suited to Cambodia's lowlands.

There are currently 58 remote microscopes throughout Australia and in Thailand, Vietnam, Laos, Singapore, Malaysia, Indonesia, East Timor, Papua New Guinea, the Solomon Islands and New Zealand.

This network enables remote diagnostics of biosecurity threats with fast and accessible information on outbreaks of exotic plant pests and diseases through a web-based diagnostic system. The concept of Remote Microscope Diagnostics (RMDs) is attractive because it allows non-experts in remote locations, to interact with diagnostic experts in real time, to identify a pest specimen. Of immediate application to insect identifications, RMDs use the Internet to connect a microscope to a computer in another location.



ACIAR enables remote diagnosis of biosecurity threats, providing information and access to experts in plant pests and diseases across the south-east Asia region.



Dr Kong's team, which led the development of the remote microscopes service, was recently awarded a Queensland Premier's Award for Excellence in Public Service Delivery, which recognises excellence, best practice and improvements in public service delivery, and also won the inaugural Australian Innovation Award in the category of Agriculture and Food. The Australian Centre for International Agricultural Research (ACIAR) is a statutory authority that operates as part of the Australian Aid Program. The Centre encourages Australia's agricultural scientists to use their skills for the benefit of developing countries and Australia.

ACIAR funds research projects that are developed within a framework reflecting the priorities of Australia's aid program and national research strengths, together with the agricultural research and development priorities of partner countries.





# Western Australia's FireWatch: Helping Indonesia Mitigate the Impact of Fire

FireWatch Indonesia is a collaborative project that aims to reduce the impact of wildfires. Major wildfires bring devastation, loss of life and damage to property and the environment. Tackling them effectively requires an accurate flow of up-to-date information on fire movements and dangerous hotspots.







Huge volumes of complex satellite and weather data must be captured, analysed and shared quickly. Only high-speed data networking can ensure that the right information gets to the right people in time to make a real difference. Indonesia has the world's third largest area of tropical rainforest after the Amazon and Congo basins and suffers fires every year. These are most fierce when El Niño creates drought and windy conditions: an increasingly common occurrence. The 1997/98 wildfires alone spewed as much carbon into the atmosphere as the entire planet's biosphere removes from it in a vear. The fires, which destroyed nearly 5 million hectares of forest, released as much as 2.5 gigatonnes of  $CO_2$  – the primary greenhouse gas - significantly fuelling global warming.

Wildfires scorching Indonesia often also blanket neighbouring countries in a choking haze, adding to regional pollution, causing severe long-term health problems and wreaking havoc on transportation. FireWatch Indonesia is a collaborative project that aims to reduce the impact of wildfires.

Indonesia's Ministry of Environment is working with Western Australia's Landgate FireWatch team to provide near real-time monitoring, using data collected by two satellites that regularly cross Indonesia.



Sumatra, Indonesia before, during and after the forest fires of 1997.

Based on Landgate's Firewatch System for Australia, the project has designed, built and installed a fire monitoring system covering the whole of Indonesia to enable the generation of valuable fire monitoring information to effectively fight fires. This information will enable early detection of fires leading to their suppression and minimising the spread of fires into Indonesia's forest and peatland habitats.

FireWatch Indonesia delivers essential fire monitoring information via a web-based data delivery system called IndoFire. The system will provide free and open access to all stakeholder groups including public and private sector agencies at all levels. IndoFire is designed to Integrate with Indonesia's developing Forest Monitoring Systems (FRIS). The data is sent via AARNet and INHERENT, the research and education networks of Australia and Indonesia respectively, to key agencies in Indonesia. TEIN4, the regional backbone network, creates the interconnection between the two national counterparts.





The skill of our people and the culture they have created has resulted in a small effective group of highly motivated, dedicated and expert staff.



### The Organisation

AARNet Pty Ltd [ACN 084 540 518] is the not-for-profit company that operates the AARNet network, providing high-capacity Internet services to Australia's universities, research institutions including CSIRO, DSTO and ANSTO, and other research and education organisations.

> Shares in AARNet Pty Ltd [AARNet] are held by thirty-eight Australian Universities and the CSIRO as listed in the enclosed AARNet Financial Report. AARNet is a licensed Australian telecommunications carrier [#61 under the Telecommunications Act 1997 Cth].

> The Chief Executive Officer reports to the Board of Directors listed in the enclosed AARNet Financial Report Appendix A. The AARNet Advisory Committee [AAC] represents the interests of the members and is a source of advice on policy and business matters.



John Batchelder Manager, Business Development

Regional Network Organisations, which are generally state based, elect one representative to the AAC.

### The AARNet Board of Directors

The Board of Directors, see the enclosed AARNet Financial Report, is responsible for the overall direction of AARNet and for providing benefits to the shareholders as required under the constitution.

> For more than 20 years, AARNet has shared and exchanged expertise with our shareholders and customers in many ways, supporting national, international collaboration and innovation in research and education and networking.

> AARNet has been effective in making representations to government on policy, legislation, strategy and programs to improve the telecommunications facilities and services available not only to the education and research sector, but to all Australians.

#### ...and our team

The skill of our people and the culture they have created has resulted in a small effective group of highly motivated, dedicated and expert staff.

> The CEO, together with the Senior Management Team, continually strive to add depth to the AARNet experience.

> The dedication of our team has enabled our national research and education network to develop and maintain one of the largest operational footprints in the world.

Owning and operating our own optical infrastructure has transformed AARNet into an asset owner and operator. With this capability AARNet requires skilled and competent network operations, infrastructure resources and the commercial expertise to continue to deliver to our customer freedom of connectivity not previously seen in Australia.

During 2013, the total number of AARNet employees grew to 74. The growth in our numbers reflects the need to efficiently resource the organization for improved customer service and infrastructure growth to meet the demands of our customers and shareholders.

This year the AARNet team welcomed Stephen O'Brien, Paul Hii, Tao Ren, Waran Naidu, May Kho, Mark Van Dyk and luPati Tumaalii. AARNet also welcomed back Peter Elford, who took up the inaugural position as Director, Government Relations.

It is with much sadness that we farewelled Mike Rebbechi who retired after 33 years in the research and education sector. Mike has been associated with AARNet for more than 25 years. Starting as an academic in engineering at Charles Sturt University, Mike then became the CIO. Mike served for 6 years on the AARNet Board, the AAC and most recently headed up the health initiative in Business Development for AARNet. Mike has worked across the spectrum of AARNet with great distinction and will be greatly missed for his wisdom and good humour.

AARNet will continue to require higher financial resources and a greater number of expert and skilled staff for long-term planning and operation of the network to meet the growing dependence on networking technology, services and applications for research and education. In parallel AARNet will continue to foster and develop its technical and business staff and management who are working to deliver enhanced customer service, network, and infrastructure growth to the Australian research and education community.



Jamie Sunderland Director, Product Solutions

#### Important Publications

Previous Annual Reports: http://www.aarnet.edu.au/about-us/ publications.aspx

AARNet's Access Policy: www.aarnet.edu.au/about-us/policies.aspx

AARNet's Peering Policy: www.aarnet.edu.au/about-us/policies.aspx

AARNet's Content Policy: www.aarnet.edu.au/about-us/policies.aspx



AARNet staff as at December 2013

Australian Capital Territory — 6

### 

Queensland – 10

South Australia — 1

Victoria – 10

Western Australia — 9



### Water: a Finite Resource

CSIRO's Water for a Healthy Country Flagship is growing and strengthening our engagement in international water-related research.



CSIRO is increasing its outreach across the Asia-Pacific region to support the adoption and impact of research to build on science excellence and to forge strategic alliances that will provide benefit to Australia and the greater region.

More specifically the Flagship is working to increase access to safe water and to inform policies and strategies that support effective water resource management.

Collaboration with key partners is central to CSIRO's ability to deliver science excellence on an international scale. The Flagship represents approximately AUD 85 million per annum investment in applied water-related research. It is the largest water research partnership in Australia with the equivalent of nearly 260 full-time staff. The Flagship brings together scientists from a wide range of disciplines, to form interdisciplinary teams to solve complex water resource challenges in the context of a changing climate and increasing population.

The Flagship has utilised AARNet to demonstrate an ability to design and deliver trans-boundary integrated water resources management solutions.

Water management is highly connected to other sectors, in particular food and energy production.


CSIROs Water for a Healthy Country Flagship is increasing its outreach across the Asia-Pacific region to improve access to safe water and support effective water resource management.



One such ground-breaking collaborative project is the CSIRO driven India-Australia Water Science and Technology Partnership, where CSIRO is helping to strengthen water resources management in India, supporting poverty alleviation and sustainable development. CSIRO has also partnered with the University of Melbourne to establish the Australia-China Joint Research Centre on River Basin Management. The Exploring Mekong Region Futures project, a transboundary project led by CSIRO, focuses on the dynamic interactions that occur with the management of food, energy and water at local and regional scales in countries in the Mekong region, and the work with the Jiangxi Institute of Water Science in China

has completed a study on the removal of excess nutrients and other contaminants from agricultural and domestic wastewaters in Jiangxi Province, China.

CSIRO is a powerhouse of ideas, technologies and skills for building prosperity, growth, health and sustainability. It serves governments, industries, business and communities across the nation.

The advanced network connectivity provided by AARNet makes this work possible. Almost everything the Centre accomplishes through its world leading research collaborations relies on the capabilities of AARNet.





## Panoramic Immersion at the Forefront of Virtual Heritage

A virtual life-size human-scale replication of China's Dunhuang caves provides students with the opportunity to dynamically explore and interact with one of the most important cultural sites in the world in new and exciting ways.





Professor Sarah Kenderdine is using immersive interactive 3D projections to give audiences a virtual archaeological tour of China's Dunhuang caves.



Through immersive interactive 3D projections of high-resolution archaeological datasets audiences are transported inside the caves as if they were physically there. They are able to interactively explore the spatial layouts of several caves as well as cultural objects, including sculptures and wall paintings, guided by teacher experts.

Research leader at the National Institute for Experimental Arts Professor Sarah Kenderdine's research has transformed this environment into a world touring exhibition. The next stage is to create a groundbreaking immersively-shared virtual classroom bringing content-rich humanities data for Silk Road studies across three distributed learning sites - City University of Hong Kong, The University of Hong Kong and the University of New South Wales - using Internet and broadband-connected Integrated Visualization System (IVS) technologies. Real-time broadband data transmission and integration of graphics, video and audio, utilising HARNET, AARNET and the Internet2 backbone, enables real-time distributed cross-cultural interactivity for teachers and students.



## Partnering with our community



The Enterprise Services group, an independent technical consulting service completed its first full year of operation.

> The group was formed following requests from customers for access to vendor neutral expertise that is committed to and understands the needs of the education and research community. This year the group has focussed on network architecture and technology services, cloud infrastructure services, rich media collaboration services and enterprise IT planning services – the team also formed strategic partnerships with AUSCERT for an independent network security review and Smart Services CRC for benchmarking and reporting capabilities for the end-to-end performance of cloud service providers. Services are expected to launch in 2014.



## A Customer Forum for each University

AARNet has taken the initiative this year to hold Customer Forums for each of the shareholders and conduct them on an institutional basis.

The aim of the Customer Forums is to obtain feedback from shareholders on AARNet's performance at all levels across the institution and to gain knowledge to develop products and services that utilise the AARNet network for the benefit of the research and education sector.

Each forum has attracted a wide range of university staff including CIO's, Directors of IT and staff from across the IT departments of the University. Researchers as well as teaching and learning staff have also participated and provided valuable input.

## **AARNet Advisory Committee**

### 2013 Annual Report

# The AARNet Advisory Committee (AAC) represents ICT management across the AARNet member community.

The AAC makes recommendations, advises and represents a consensus of views held by the member community. AAC also assists AARNet Pty Ltd (APL) to effectively communicate with its members, both directly and via regional network organisations (RNOs) where they exist.

During 2013 the AAC met on four occasions providing advice to the AARNet Board and senior management on a range of operational and strategic matters. Meetings were held once in Canberra, twice in Melbourne, and once by Videoconference.

#### Initiatives

Following the revision of AARNet's strategic plan in 2013 the AAC focused on assisting AARNet with the implementation of new "above the network" business initiatives including NET+ services, development of the CloudStor/CloudStor+ and the new enterprise consulting services.

> The AAC recognised the importance of AARNet4, and to the implementation of the various National Research Network (NRN) projects, all of which were well progressed by the end of 2013.

The focus on regional matters was maintained with great interest in the three prospective commercial submarine cable builds from Perth to Singapore.

### The Future

As AARNet moves toward a national and international 100Gbps backbone, the AAC contributed to the development of AARNet's Future Technology Roadmap, where we will see 1Tbps (1,000Gbps) interconnections between cities over an optical backbone capable of multiple 10Tbps bearers.

> It is this roadmap that will support the emerging data centre, cloud and mobility landscapes, and the growth of the research and education sector over the next ten years. The road map feeds into AARNet's long range strategy which provides a sustainable vision for the organisation and the network into the foreseeable future.

AARNet would like to sincerely thank the AAC committee for their invaluable input and support during the year.







## University of Adelaide joins with Shanxi College China to create Joint Research Centre

The University of Adelaide, the Shanxi College of Traditional Chinese Medicine and the Zhendong Pharmaceutical Company have collaborated to create a joint research centre, to explore new frontiers in health research.







University of Adelaide Vice-Chancellor and President, Professor James McWha AO, said the partnership offered a unique model of operation. "It's an exciting venture that can only strengthen the ties between our two countries and we are very grateful for the support of China's State Administration for Traditional Chinese Medicine."

"This significant partnership offers a unique model of operation; bringing together an Australian university, a Chinese university, and direct investment from a Chinese company in a ground-breaking development that offers tremendous opportunities for creative research and new discoveries with potential health benefits for us all.

AARNet allows the universities to diminish time and space, utilising the network to share data in real time and work to bring together exponents of traditional Chinese medicine with molecular science – opening the way for new funding and the expansion of interest in traditional Chinese medicine and its potential use in global healthcare.

The Zhendong Centre was launched at an event which also marked the 40<sup>th</sup> anniversary of diplomatic relations between Australian and China. Those present at the event included the Vice Minister of Health and Director of the State Administration of Traditional Chinese Medicine Wang Guoqiang, Australian Ambassador to China Frances Adamson, Executive Chairman of China Pharmaceutical Industry Research and Development Association Song Ruilin, Opposite page and this page, left and below right: Images created for the opening of the University of Adelaide Zhendong Australia China Joint Research Centre;

Right: University of Adelaide PhD student Zhipeng Qu in the Zhendong Australia China Centre for Molecular Traditional Chinese Medicine.





Shanxi College of Traditional Chinese Medicine President Professor Zhou Ran, Zhendong Pharmaceutical Company Chairman Li Anping and University of Adelaide Vice-Chancellor and President Professor James McWha.

At the University of Adelaide, the Zhendong Centre will be based within the School of Molecular and Biomedical Science. The Centre will investigate the mode of action of Traditional Chinese Medicine using the rapidly growing field of Systems or Network Biology which looks at the regulation of complex biological systems in the body. "The application of systems biology to Traditional Chinese Medicine is particularly exciting because it explores what effects there may be on the molecular/genetic networks that are altered in sickness," said Director of the Zhendong Centre, Professor David Adelson.

"This not only will provide us with an understanding of how Traditional Chinese Medicine acts – supporting its evidence-based integration into Western medicine – but will also increase our understanding of the molecular mechanisms underlying disease."



## Appendix A

## List of Shareholders

The Australian National University The Commonwealth Scientific and Industrial Research Organisation University of Canberra Charles Sturt University Macquarie University Southern Cross University The Australian Catholic University The University of New England The University of New South Wales The University of Newcastle The University of Sydney University of Technology, Sydney University of Western Sudney University of Wollongong Charles Darwin University Bond University Central Queensland University Griffith University James Cook University Queensland University of Technology The University of Queensland University of Southern Queensland University of the Sunshine Coast The Flinders University of South Australia The University of Adelaide University of South Australia University of Tasmania Deakin Universitu La Trobe University Monash University RMIT University Swinburne University of Technology The University of Melbourne University of Ballarat Victoria University Curtin University Edith Cowan University Murdoch University The University of Western Australia

## **Board of Directors**

Emeritus Professor GR Sutton AO Chair of the Board and Chair of the Nomination and Remuneration Committee

Professor MN Barber

Mr OJ Barrett Deputy Chair of the Board and member of the Audit, Finance and Risk Committee

Mr CM Hancock Chief Executive Officer

Professor L Kristjanson

Mr P Nikoletatos Chair of the AARNet Advisory Committee

Mr JF Rohan Chair of the Audit, Finance and Risk Committee and member of the Nomination and Remuneration Committee

Dr I Tebbett

Emeritus Professor MS Wainwright AM Member of the Audit, Finance and Risk Committee

Professor IR Young AO

Mr N Poole (to 31 December 2013) Member of the Nomination and Remuneration Committee

Mr M Bailey (to 4 March 2014)

Dr David Williams (from 10 January 2014)





# AARNet Pty Ltd Financial Report 2013

for the year ended 31 December 2013

ABN 54 084 540 518

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## 02 Directors' report 31 December 2013

Your Directors present their report on the Company, AARNet Pty Limited ("AARNet"), for the year ended 31 December 2013.

The following persons were Directors of AARNet during the whole of the financial year and up to the date of this report:

Emeritus Professor GR Sutton AO (Chair of the Board and Chair of the Nomination and Remuneration Committee)

Professor MN Barber

Mr OJ Barrett (Deputy Chair of the Board and member of the Audit, Finance and Risk Committee)

Mr CM Hancock (Chief Executive Officer)

Professor L Kristjanson

Mr P Nikoletatos (Chair of the AARNet Advisory Committee)

Mr JF Rohan (Chair of the Audit, Finance and Risk Committee and member of the Nomination and Remuneration Committee)

Dr I Tebbett

Emeritus Professor MS Wainwright AM (member of the Audit, Finance and Risk Committee)

Professor IR Young AO

Mr N Poole (member of the Nomination and Remuneration Committee) was a director of the Company from the beginning of the financial year until his resignation on 31 December 2013.

Mr M Bailey was a director of the Company from 30 April 2013 until his resignation on 4 March 2014.

#### Principal activities

AARNet is a not for profit, proprietary company in which 38 Australian universities and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) have an equal shareholding.

AARNet's principal activity is the provision of internet and advanced network services to its shareholders ("Members") and to other relevant organisations ("Customers"). Services are provided in accordance with the AARNet Access Policy in order that Members and Customers may:

- (a) use AARNet's internet and other telecommunications facilities and services to provide educational programs and conduct research activities in an efficient and cost effective manner; and
- (b) collaborate with other parties (nationally and internationally) in furtherance of research and education objectives.

#### Other activities

In addition, AARNet:

- (a) makes representations to all levels of government on policy, legislation and programs to improve the telecommunications facilities and services available to its Members and Customers;
- (b) participates in the design and deployment of advanced network infrastructure, applications and services in partnership with network organisations in Australia and internationally, to develop national and global research and education networks; and
- (c) facilitates the construction of connections (fibre tails) to the AARNet backbone and between campuses and other locations to facilitate services for Members and Customers.

#### Dividends

AARNet's constitution prohibits the payment of dividends or other distributions to its shareholders. Accordingly, no dividends have been paid, declared or recommended either during the financial year or in the period since that year ended (2012: nil).

### Review of operations

#### Network Performance

During the year AARNet's network services again provided high levels of performance and availability. In particular:

- (a) the volume of traffic carried across the network increased by 49.8% (2012: also 49.8%);
- (b) Average network availability at 99.97% was above target (99.95%) and higher than 2012 (99.94%). Nevertheless, there were a small number of outages in sectors of the network where diverse (redundant) links were not provided, due to the disproportionate cost involved, and this lowered availability in those sectors.

Over the five years up to and including 2013 traffic for Members and Customers combined has grown at an annualised rate of 51.9% per annum. Within this, traffic for Members only has grown by an annualised rate of 49.3% per annum over the same period.

Despite this significant and sustained growth in Members' traffic, Members' subscriptions have, over the same period, only increased at an annualised rate of 3.96% per annum. In 2013, Member's Subscriptions were only 2.75% higher than the previous year. This has provided increasing value for money for Members and Customers.

## Directors' report 31 December 2013 (continued)

#### Network Expansion

During 2013 AARNet made significant investments in infrastructure and equipment to expand the reach and capability of the network. Much of this investment was assisted by funding from the National Research Network ("NRN") Program, an initiative of the Australian Government conducted as part of the Super Science Initiative and financed from the Education Investment Fund.

In particular, AARNet completed lighting the optical fibre between Adelaide and Perth which provided a significant boost to the capacity available between the east and west coasts of the country. Other significant projects included the extension of AARNet's fibre "rings" in Perth, Brisbane and Sydney; investment in additional fibre infrastructure in regional Queensland and Western Australia; and the deployment of infrastructure and equipment supporting the RDSI program (Research Data Storage Initiative). Federal funding for these projects is a significant investment by the federal government and is of enormous value to AARNet and its Members.

During 2013, AARNet also began to rollout AARNet4, the next generation of technology on which the AARNet network will be based. This project, which has been in planning for several years, will involve a technology refresh across the most of the AARNet network.

Several million dollars were invested in AARNet4 during 2013 and significant investments will be required for another three to four years. While the project is still at an early stage, an important milestone was achieved on 31 December 2013 when the first customer traffic began being transported across AARNet 4.

#### Subscriptions and Service Revenues

Subscriptions from Members, net of early payment discounts, for 2013 totalled \$37,025,250 (2012: \$36,517,401). The growth in subscriptions represents an increase of just 1.4%.

Six members exceeded their off-net traffic quota during 2013 and incurred excess traffic charges. After including these charges the increase in member subscriptions was 2.75%. In contrast, Members' traffic (both on-net and off-net) grew at a rate of 43.5% during 2013.

Revenue from all telecommunications services, including Members' subscriptions, Customers' charges and all other services, for 2013 was \$57,393,269 (2012: \$52,162,437), an increase of 10%. AARNet experienced significant growth in revenues from Customers and in non-subscription revenues from Members (for the delivery of virtual circuits and services supplied over infrastructure developed by AARNet).

Revenue from infrastructure construction activities of \$1,009,677 was marginally lower than the \$1,187,741 recorded in 2012. In both 2012 and 2013 AARNet's Infrastructure Development Group devoted considerable resource and effort to projects funded by the National Network Research Program referred to earlier. The funds under this program are accounted for as Contributions (see further below) and not as revenues from infrastructure projects.

#### Contributions and Other Incomes

During 2013 AARNet received contributions in respect of the National Research Network Program of \$10,784,771 (2012: \$7,505,320). These contributions are employed by AARNet to fund construction of infrastructure or to acquire and install equipment, which together extend the reach and capacity of the network and the services AARNet is able to provide, for the benefit of Members and Customers alike.

Being a non-for-profit organisation, AARNet must take these contributions into income even though the funds concerned may be expended on the acquisition of assets which are capitalised and not immediately expensed.

The receipt of these funds and the manner in which they are accounted for as income has a significant impact on AARNet's financial results (see further below).

During 2013 AARNet began making applications to those states and territories in which it employs personnel, for exemption from payroll tax. Some jurisdictions have assessed these applications, granted AARNet an exemption from payroll tax and refunded taxes previously paid. In 2013 these refunds totalled \$1,093,799 (2012: nil).

Some jurisdictions have yet to determine whether to grant AARNet an exemption. Due to the lack of certainty that any further exemptions will be granted AARNet has not recognised any amounts beyond those received in 2013 as income.

AARNet has significant contractual commitments requiring it to make foreign currency denominated payments (mainly in United States Dollars) for international transmission capacity. These commitments extend for periods in excess of five years and are included in those referred to in note 2 to the financial statements.

In order to manage the exposure to exchange rate fluctuations with respect to these commitments (and other payments required in foreign currencies), AARNet arranges forward foreign currency purchases with its bankers and maintains holdings of foreign currency balances. These arrangements are discussed in note 6 to the financial statements.

During 2013 the Australian Dollar depreciated against the United States Dollar with the result that AARNet recorded an accounting gain on the hedging arrangements it had in place. This gain amounted to \$2,040,658 (2012: loss of \$1,112,599).

Together, these various items represent a substantial part of the surplus AARNet recorded in 2013 and 2012 as shown below:

	2013	2012
	\$	\$
NRN Contributions taken to income	10,784,771	7,505,320
Costs associated with NRN Projects		
immediately expensed	(875,083)	-
Payroll Tax Refunds	1,093,799	-
Gain/(Loss) on foreign currency contracts	2,040,658	(1,112,599)
Aggregate Effect	13,044,145	6,392,721

#### Telecommunication and Other Expenses

Telecommunications expenses reduced from 18,683,932 in 2012 to 16,581,731 (equivalent to a reduction of 11.3%). This was driven by:

- a new and advantageous, but limited term, agreement with a key supplier for the carriage of traffic between AARNet and the general internet; and
- (b) costs paid to a third party to access capacity on that party's network for the benefit of certain AARNet customers – these costs are directly recovered from the customers concerned.

Excluding the effect of these two items, telecommunications costs were 7.1% higher than in 2012 and this was principally due to the cost of international transmission capacity (including the cost of upgraded capacity in 2012 being used for a full year in 2013).

Depreciation and Amortisation costs were significantly higher than in 2012. This was driven by increased investments in capacity, both domestically and internationally. Key domestic investments included the project to light the route between Adelaide to Perth (referred to earlier) while the increased international costs flows from the additional trans-Pacific capacity which commenced in 2012 but was amortised for a full year during 2013.

Employee benefits expenses, both generally and in relation to infrastructure construction projects, increased during 2013 with part of the increase due to higher staffing levels than in 2012 (with persons recruited during 2012 receiving a full year's salary, on-costs and entitlements during 2013).

Infrastructure Project Costs were significantly higher than in 2012 with much of the increase due to equipment purchased for a NRN Project – ownership of this equipment will pass to third parties and was therefore immediately expensed.

#### Accumulated Surplus and Reserves

In 2013 AARNet recorded a surplus (Net Income) of \$22,036,190 (2012: \$15,339,470). Surpluses earned in recent years, aided by conservative financial management, have been accumulated into significant reserves of cash and investments.

In the Board's view, it is necessary and prudent for AARNet to aim to generate a surplus in order that:

- (a) AARNet can meet its outstanding contracted commitments which exceeded \$81m at year end (refer note 2 to the financial statements); and
- (b) Fund investments in network capability and services;

without calling on Members to contribute further equity to the company.

Surpluses earned by AARNet cannot (by virtue of the terms of AARNet's constitution) be distributed to the shareholders.

During 2013, AARNet drew on these accumulated resources to fund the initial investments in AARNet4 and also to make a significant payment against outstanding contractual commitments to a key supplier of international capacity.

Surpluses earned in recent years, aided by conservative financial management, have therefore been accumulated into significant holdings of cash and investments.

AARNet also intends to use the accumulated funds during 2014 and later years to:

- (a) Finance further investments in infrastructure and equipment to expand the reach and capability of AARNet's network;
- (b) supplement members subscriptions and other income in future years; and
- (c) defray part of the significant financial commitments in respect of non-cancellable operating leases (principally rights to use the traffic paths of fibre cable systems).

#### Net Assets

Net assets at 31 December 2013 were \$130,346,199 (2012: \$107,930,680). The increase represents the Net Income for 2013 plus the change in value of available-for-sale financial assets during 2013.

#### Significant changes in the state of affairs

Except for the matters discussed under the heading "Review of Operations" there were no significant changes in the Company's state of affairs during the financial year ended 31 December 2013.

#### Matters subsequent to the end of the financial year

Except for matters discussed under the heading "Review of operations" and for the potential exemption from payroll tax discussed below, no other matter or circumstance has arisen since 31 December 2013 that has significantly affected or may significantly affect:

- (a) AARNet's operations in future financial years;
- (b) the results of those operations in future financial years; or
- (c) AARNet's state of affairs in future financial years.

#### Likely developments and expected results of operations

AARNet expects that the rate of growth in network traffic will continue at significant levels during 2014, reflecting the historical trends experienced by the company.

AARNet has applied for exemption from payroll tax in all of the states and territories where it employs personnel. Some of these jurisdictions have granted an exemption and provided refunds of taxes previously paid. While there is no certainty that any of the remaining applications will be successful, if exemptions were to be granted by these other jurisdictions, AARNet would benefit from a significant reduction in employment related costs and may also receive significant refunds of taxes previously paid.

#### Environmental regulation

AARNet's operations are not adversely affected by any significant environmental regulation. AARNet believes its greenhouse gas emissions are substantially below the thresholds that are subject to the reporting requirements of either the *Energy Efficiency Opportunities Act 2006* and the National Greenhouse and Energy Reporting Act 2007.

#### Insurance for Officers

During the financial year, AARNet paid a premium of \$17,266 (2012: \$17,424) in respect of liability insurance for the company's Directors and Officers. The liabilities insured against are costs and expenses that may be incurred in defending civil or criminal proceedings that may be brought against the Directors and Officers in their capacity as Directors and Officers of AARNet, and any other payments arising from liabilities incurred by the Officers in connection with such proceedings, other than where such liabilities arise out of conduct involving a wilful breach of duty by the Directors or Officers or the improper use by the Directors or Officers of their position or of information to gain advantage for themselves or someone else or to cause detriment to AARNet. It is not possible to apportion the premium between amounts relating to the insurance against legal costs and those relating to other liabilities.

No known liability has arisen under these indemnities to the date of this report.

#### Agreement to indemnify Officers

Under the terms of its Constitution, AARNet provides indemnity to persons who are, or have been, an officer or auditor of AARNet, but only to the extent permitted by law and to the extent that the officer or auditor is not indemnified by Directors' and Officers' liability insurance maintained by AARNet. The indemnity is against liability incurred by that person as an officer or auditor of AARNet to another person and for costs and expenses incurred by the officer or auditor in defending such proceedings.

Separately, AARNet and each director of AARNet have entered into a Deed of Indemnity under which AARNet indemnifies each director against any liability:

- (a) to a third party (that is, other than to AARNet) unless the liability arises out of conduct involving a lack of good faith; and
- (b) for legal costs incurred in successfully defending civil or criminal proceedings or in connection with proceedings in which relief is granted under the *Corporations Act 2001*.

No known liability has arisen under these indemnities as at the date of this report.

#### Auditor

PricewaterhouseCoopers continues in office in accordance with section 327 of the *Corporations Act 2001*.

This report is made in accordance with a resolution of Directors.

My Just

Emeritus Professor GR Sutton AO

Mr CM Hancock Director

Hours.

Melbourne 26<sup>th</sup> March 2014

## OF Auditor's independence declaration



## **Auditor's Independence Declaration**

As lead auditor for the audit of AARNet Pty Ltd for the year ended 31 December 2013, I declare that to the best of my knowledge and belief, there have been:

- a) no contraventions of the auditor independence requirements of the *Corporations Act* 2001 in relation to the audit; and
- b) no contraventions of any applicable code of professional conduct in relation to the audit.

Rosalie Wilkie Partner PricewaterhouseCoopers

Sydney 26 March 2014

**PricewaterhouseCoopers, ABN 52 780 433 757** Darling Park Tower 2, 201 Sussex Street, GPO BOX 2650, SYDNEY NSW 1171 T: +61 2 8266 0000, F: +61 2 8266 9999, www.pwc.com.au

Liability limited by a scheme approved under Professional Standards Legislation.

For the year ended 31 December 2013

## Statement of comprehensive income

For the year ended 31 December 2013

Telecommunications revenue         54,263,625         50,246,881           Infrastructure service fees         3,129,644         1,915,556           Infrastructure project         construction revenue         1,009,677         1,187,741           Total services revenue         58,402,946         53,350,178           Other revenue:         Interest         2,469,603         2,858,252           Dividends         124,681         197,977           Gain on foreign currency contracts         4         2,040,658         -           Payroll tax refund         4         1,093,799         -           Other income         477,013         443,044           Total other revenue         6,205,754         3,499,273           Contributions - National Research         Network Program         4         10,784,771         7,505,320           Total revenue and income         75,393,471         64,354,771         18,683,932)         Depreciation and amortisation -           Telecommunications         5         (13,309,374)         (9,455,545)         Smployee benefits expense -           Telecommunications         (4,326,929)         (4,909,499)         Infrastructure project construction         (3,466,316)         (1,836,242)           Depreciation and amortisation -         Infra		Notes	31 December 2013 \$	31 December 2012 \$
Infrastructure project construction revenue         1,009,677         1,187,741           Total services revenue         58,402,946         53,350,178           Other revenue:         Interest         2,469,603         2,858,252           Dividends         124,681         197,977           Gain on foreign currency contracts         4         2,040,658         -           Payroll tax refund         4         1,093,799         -           Other income         477,013         443,044           Total other revenue         6,205,754         3,499,273           Contributions - National Research         Network Program         4         10,784,771         7,505,320           Total revenue and income         75,393,471         64,354,771         Telecommunications expenses         (16,581,731)         (18,683,932)           Depreciation and amortisation -         Telecommunications         5         (13,309,374)         (9,455,545)           Employee benefits expense -         Telecommunications         (9,922,105)         (8,947,843)           Administration -         Telecommunications         (4,326,929)         (4,909,499)           Infrastructure projects         5         (3,351,159)         (1,680,768)           Employee benefits expense -         Infrastructure	Telecommunications revenue		54,263,625	50,246,881
construction revenue         1,009,677         1,187,741           Total services revenue         58,402,946         53,350,178           Other revenue:         Interest         2,469,603         2,858,252           Dividends         124,681         197,977           Gain on foreign currency contracts         4         2,040,658         -           Payroll tax refund         4         1,093,799         -           Other income         477,013         443,044           Total other revenue         6,205,754         3,499,273           Contributions - National Research         Network Program         4         10,784,771         7,505,320           Total revenue and income         75,393,471         64,354,771         Telecommunications expenses         (16,581,731)         (18,683,932)           Depreciation and amortisation -         Telecommunications         5         (13,309,374)         (9,455,545)           Employee benefits expense -         Telecommunications         (9,922,105)         (8,947,843)           Administration -         1         1         1,860,768)         Employee benefits expense -           Infrastructure projects         5         (3,351,159)         (1,680,768)         Employee benefits expense -           Infrastructure proje			3,129,644	1,915,556
Other revenue:         District Stress         District Stress           Interest         2,469,603         2,858,252           Dividends         124,681         197,977           Gain on foreign currency contracts         4         2,040,658         -           Payroll tax refund         4         1,093,799         -           Other income         477,013         443,044           Total other revenue         6,205,754         3,499,273           Contributions - National Research         -         -           Network Program         4         10,784,771         7,505,320           Total revenue and income         75,393,471         64,354,771           Telecommunications expenses         (16,581,731)         (18,683,932)           Depreciation and amortisation -         -         -           Telecommunications         5         (13,309,374)         (9,455,545)           Employee benefits expense -         -         -         -           Telecommunications         (4,326,929)         (4,909,499)         -           Infrastructure project construction         (3,466,316)         (1,886,242)         -           Depreciation and amortisation -         -         -         -         - <tr< td=""><td></td><td></td><td>1,009,677</td><td>1,187,741</td></tr<>			1,009,677	1,187,741
Interest       2,469,603       2,858,252         Dividends       124,681       197,977         Gain on foreign currency contracts       4       2,040,658       -         Payroll tax refund       4       1,093,799       -         Other income       477,013       443,044         Total other revenue       6,205,754       3,499,273         Contributions - National Research       -         Network Program       4       10,784,771       7,505,320         Total revenue and income       75,393,471       64,354,771         Telecommunications expenses       (16,581,731)       (18,683,932)         Depreciation and amortisation -       -       -         Telecommunications       5       (13,309,374)       (9,455,545)         Employee benefits expense -       -       -       -         Telecommunications       (9,922,105)       (8,947,843)       -         Administration -       -       -       -       -         Telecommunications       (9,922,105)       (8,947,843)       -       -         Administration -       -       -       -       -       -         Infrastructure project construction       (3,466,316)       (1,886,242)	Total services revenue		58,402,946	53,350,178
Dividends         124,681         197,977           Gain on foreign currency contracts         4         2,040,658         -           Payroll tax refund         4         1,093,799         -           Other income         477,013         443,044           Total other revenue         6,205,754         3,499,273           Contributions - National Research         -         -           Network Program         4         10,784,771         7,505,320           Total revenue and income         75,393,471         64,354,771           Telecommunications expenses         (16,581,731)         (18,683,932)           Depreciation and amortisation -         -         -           Telecommunications         5         (13,309,374)         (9,455,545)           Employee benefits expense -         -         -         -           Telecommunications         (9,922,105)         (8,947,843)         -           Administration -         -         -         -         -           Telecommunications         (4,326,929)         (4,909,499)         -           Infrastructure project construction         (3,466,316)         (1,886,242)         -           Depreciation and amortisation -         -         - <t< td=""><td>Other revenue:</td><td></td><td></td><td></td></t<>	Other revenue:			
Gain on foreign currency contracts       4       2,040,658       -         Payroll tax refund       4       1,093,799       -         Other income       477,013       443,044         Total other revenue       6,205,754       3,499,273         Contributions - National Research       Network Program       4       10,784,771       7,505,320         Total revenue and income       75,393,471       64,354,771       7,505,320         Total revenue and income       75,393,471       64,354,771         Telecommunications expenses       (16,581,731)       (18,683,932)         Depreciation and amortisation -       10,784,771       (9,455,545)         Employee benefits expense -       19,922,105)       (8,947,843)         Administration -       10,784,716       (1,868,942)         Depreciation and amortisation -       10,784,713       (18,68,242)         Depreciation and amortisation -       10,784,714       (1,886,242)         Depreciation and amortisation -       10,784,7159       (1,680,768)         Infrastructure project construction       (3,466,316)       (1,880,768)         Employee benefits expense -       10,788,305)       (1,755,499)         Administration - Infrastructure       10,790       10,725,499)	Interest			2,858,252
Payroll tax refund       4       1,093,799       -         Other income       477,013       443,044         Total other revenue       6,205,754       3,499,273         Contributions - National Research Network Program       4       10,784,771       7,505,320         Total revenue and income       75,393,471       64,354,771         Telecommunications expenses       (16,581,731)       (18,683,932)         Depreciation and amortisation - Telecommunications       5       (13,309,374)       (9,455,545)         Employee benefits expense - Telecommunications       (9,922,105)       (8,947,843)         Administration -       7       1         Telecommunications       (4,326,929)       (4,909,499)         Infrastructure project construction       (3,466,316)       (1,836,242)         Depreciation and amortisation - Infrastructure projects       5       (3,351,159)       (1,680,768)         Employee benefits expense - Infrastructure projects       5       (3,351,159)       (1,680,768)         Employee benefits expense - Infrastructure Development Group       (432,308)       (511,079)         Loss on foreign currency contracts       4       -       (1,112,599)         Other expenses       (179,054)       (122,295)       Total expenses       (53,357,281) </td <td></td> <td></td> <td>•</td> <td>197,977</td>			•	197,977
Other income         477,013         443,044           Total other revenue         6,205,754         3,499,273           Contributions - National Research Network Program         4         10,784,771         7,505,320           Total revenue and income         75,393,471         64,354,771           Telecommunications expenses         (16,581,731)         (18,683,932)           Depreciation and amortisation - Telecommunications         5         (13,309,374)         (9,455,545)           Employee benefits expense - Telecommunications         (9,922,105)         (8,947,843)           Administration -         7         1         (1,866,242)           Depreciation and amortisation - Telecommunications         (4,326,929)         (4,909,499)           Infrastructure project construction         (3,466,316)         (1,886,242)           Depreciation and amortisation - Infrastructure projects         5         (3,351,159)         (1,680,768)           Employee benefits expense - Infrastructure Development Group         (1,788,305)         (1,755,499)         Administration - Infrastructure           Development Group         (432,308)         (511,079)         Loss on foreign currency contracts         4         (1,112,599)           Other expenses         (179,054)         (122,295)         Total expenses         (53,357,281)<				-
Total other revenue         6,205,754         3,499,273           Contributions - National Research Network Program         4         10,784,771         7,505,320           Total revenue and income         75,393,471         64,354,771         7,505,320           Total revenue and income         75,393,471         64,354,771         7,505,320           Total revenue and income         75,393,471         64,354,771         7,505,320           Depreciation and amortisation - Telecommunications         5         (13,309,374)         (9,455,545)           Employee benefits expense - Telecommunications         (9,922,105)         (8,947,843)           Administration -         (4,326,929)         (4,909,499)           Infrastructure project construction         (3,466,316)         (1,836,242)           Depreciation and amortisation - Infrastructure projects         5         (3,351,159)         (1,680,768)           Employee benefits expense - Infrastructure Development Group         (1,788,305)         (1,755,499)         Administration - Infrastructure           Development Group         (432,308)         (511,079)         Loss on foreign currency contracts         4         (1,112,599)           Other expenses         (179,054)         (122,295)         Total expenses         (53,357,281)         (49,015,301)	1	4		-
Contributions - National Research         Network Program       4       10,784,771       7,505,320         Total revenue and income       75,393,471       64,354,771         Telecommunications expenses       (16,581,731)       (18,683,932)         Depreciation and amortisation -       -         Telecommunications       5       (13,309,374)       (9,455,545)         Employee benefits expense -       -       -         Telecommunications       (9,922,105)       (8,947,843)         Administration -       -       -         Telecommunications       (4,326,929)       (4,909,499)         Infrastructure project construction       (3,466,316)       (1,836,242)         Depreciation and amortisation -       -       -         Infrastructure projects       5       (3,351,159)       (1,680,768)         Employee benefits expense -       -       -       -         Infrastructure Development Group       (1,788,305)       (1,755,499)         Administration - Infrastructure       -       -       (1,112,599)         Other expenses       (179,054)       (122,295)       -         Total expenses       (53,357,281)       (49,015,301)	Other income		477,013	443,044
Network Program         4         10,784,771         7,505,320           Total revenue and income         75,393,471         64,354,771           Telecommunications expenses         (16,581,731)         (18,683,932)           Depreciation and amortisation - Telecommunications         5         (13,309,374)         (9,455,545)           Employee benefits expense - Telecommunications         (9,922,105)         (8,947,843)           Administration - Telecommunications         (4,326,929)         (4,909,499)           Infrastructure project construction         (3,466,316)         (1,836,242)           Depreciation and amortisation - Infrastructure projects         5         (3,351,159)         (1,680,768)           Employee benefits expense - Infrastructure projects         5         (3,351,159)         (1,680,768)           Employee benefits expense - Infrastructure Development Group         (1,788,305)         (1,755,499)           Administration - Infrastructure         Development Group         (432,308)         (511,079)           Loss on foreign currency contracts         4         -         (1,112,599)           Other expenses         (179,054)         (122,295)         Total expenses         (53,357,281)         (49,015,301)	Total other revenue		6,205,754	3,499,273
Telecommunications expenses       (16,581,731)       (18,683,932)         Depreciation and amortisation -       Telecommunications       5       (13,309,374)       (9,455,545)         Employee benefits expense -       Telecommunications       (9,922,105)       (8,947,843)         Administration -       Telecommunications       (4,326,929)       (4,909,499)         Infrastructure project construction       (3,466,316)       (1,836,242)         Depreciation and amortisation -       Infrastructure projects       5       (3,351,159)       (1,680,768)         Employee benefits expense -       Infrastructure projects       5       (3,351,159)       (1,680,768)         Infrastructure projects       5       (3,351,159)       (1,680,768)         Employee benefits expense -       Infrastructure Development Group       (1,788,305)       (1,755,499)         Administration - Infrastructure       Development Group       (432,308)       (511,079)         Loss on foreign currency contracts       4       -       (1,112,599)         Other expenses       (179,054)       (122,295)         Total expenses       (53,357,281)       (49,015,301)		4	10,784,771	7,505,320
Depreciation and amortisation - Telecommunications5(13,309,374)(9,455,545)Employee benefits expense - Telecommunications(9,922,105)(8,947,843)Administration - Telecommunications(4,326,929)(4,909,499)Infrastructure project construction(3,466,316)(1,836,242)Depreciation and amortisation - Infrastructure projects5(3,351,159)(1,680,768)Employee benefits expense - Infrastructure Development Group(1,788,305)(1,755,499)Administration - Infrastructure Development Group(432,308)(511,079)Loss on foreign currency contracts4-(1,112,599)Other expenses(179,054)(122,295)Total expenses(53,357,281)(49,015,301)	Total revenue and income		75,393,471	64,354,771
Telecommunications       5       (13,309,374)       (9,455,545)         Employee benefits expense -       1       1       1         Telecommunications       (9,922,105)       (8,947,843)         Administration -       1       1         Telecommunications       (4,326,929)       (4,909,499)         Infrastructure project construction       (3,466,316)       (1,836,242)         Depreciation and amortisation -       1       1         Infrastructure projects       5       (3,351,159)       (1,680,768)         Employee benefits expense -       1       1       1         Infrastructure Development Group       (1,788,305)       (1,755,499)         Administration - Infrastructure       1       1       1         Development Group       (432,308)       (511,079)       1         Loss on foreign currency contracts       4       -       (1,112,599)         Other expenses       (179,054)       (122,295)       1         Total expenses       (53,357,281)       (49,015,301)	Telecommunications expenses		(16,581,731)	(18,683,932)
Telecommunications       (9,922,105)       (8,947,843)         Administration -	Telecommunications	5	(13,309,374)	(9,455,545)
Telecommunications       (4,326,929)       (4,909,499)         Infrastructure project construction       (3,466,316)       (1,836,242)         Depreciation and amortisation -       Infrastructure projects       5       (3,351,159)       (1,680,768)         Employee benefits expense -       Infrastructure Development Group       (1,788,305)       (1,755,499)         Administration - Infrastructure       Development Group       (432,308)       (511,079)         Loss on foreign currency contracts       4       -       (1,112,599)         Other expenses       (179,054)       (122,295)         Total expenses       (53,357,281)       (49,015,301)	Telecommunications		(9,922,105)	(8,947,843)
Infrastructure project construction         (3,466,316)         (1,836,242)           Depreciation and amortisation -         Infrastructure projects         5         (3,351,159)         (1,680,768)           Infrastructure projects         5         (3,351,159)         (1,680,768)           Employee benefits expense -         Infrastructure Development Group         (1,788,305)         (1,755,499)           Administration - Infrastructure         Development Group         (432,308)         (511,079)           Loss on foreign currency contracts         4         -         (1,112,599)           Other expenses         (179,054)         (122,295)           Total expenses         (53,357,281)         (49,015,301)			(4 326 929)	(4 909 499)
Depreciation and amortisation - Infrastructure projects         5         (3,351,159)         (1,680,768)           Employee benefits expense - Infrastructure Development Group         (1,788,305)         (1,755,499)           Administration - Infrastructure Development Group         (432,308)         (511,079)           Loss on foreign currency contracts         4         -         (1,112,599)           Other expenses         (179,054)         (122,295)           Total expenses         (53,357,281)         (49,015,301)				• • • •
Employee benefits expense -       [1,788,305]       (1,755,499)         Infrastructure Development Group       [1,788,305]       (1,755,499)         Administration - Infrastructure       Development Group       [432,308]       (511,079)         Loss on foreign currency contracts       4       -       [1,112,599]         Other expenses       [179,054]       [122,295]         Total expenses       [53,357,281]       (49,015,301]				
Infrastructure Development Group         (1,788,305)         (1,755,499)           Administration - Infrastructure         (1,788,305)         (1,755,499)           Development Group         (432,308)         (511,079)           Loss on foreign currency contracts         4         -         (1,112,599)           Other expenses         (179,054)         (122,295)           Total expenses         (53,357,281)         (49,015,301)	Infrastructure projects	5	(3,351,159)	(1,680,768)
Development Group         (432,308)         (511,079)           Loss on foreign currency contracts         4         -         (1,112,599)           Other expenses         (179,054)         (122,295)           Total expenses         (53,357,281)         (49,015,301)	Infrastructure Development Group		(1,788,305)	(1,755,499)
Loss on foreign currency contracts         -         (1,112,599)           Other expenses         (179,054)         (122,295)           Total expenses         (53,357,281)         (49,015,301)			(432,308)	(511,079)
Total expenses (53,357,281) (49,015,301)	Loss on foreign currency contracts	4	-	(1,112,599)
	Other expenses		(179,054)	(122,295)
Net income 22,036,190 15,339,470	Total expenses		(53,357,281)	(49,015,301)
	Net income		22,036,190	15,339,470

The above income statement should be read in conjunction with the accompanying notes.

1	Notes	31 December 2013 \$	31 December 2012 \$
Net income for the year Other comprehensive income Items that may be reclassified to net income		22,036,190	15,339,470
Movement in the fair value of available-for-sale financial assets		379,329	293,742
Other comprehensive income for the year, net of tax		379,329	293,742
Total comprehensive income for the year		22,415,519	15,633,212
Total comprehensive income for the year is attributable to: Ultimate beneficiaries of AARNet Pty Ltd 2	22	22,415,519	15,633,212

The above statement of comprehensive income should be read in conjunction with the accompanying notes.

## 08 Balance sheet as at 31 December 2013

	Notes	31 December 2013	31 December 2012
ASSETS		\$	\$
Current assets			
Cash and cash equivalents	7	26,243,557	33,059,351
Receivables	8	18,512,863	15,431,241
Held-to-maturity investments	9	9,412,596	7,502,412
Accrued income	10	1,656,830	3,555,365
Derivative financial instrument		479,724	-
Total current assets		56,305,570	59,548,369
Non-current assets			
Receivables	11	83,518	131,866
Available-for-sale financial assets	12	10,454,346	4,589,821
Held-to-maturity investments	13	9,121,072	14,418,274
Other financial assets - Non-controlling investment in Smart Services CRC Pty Limited		1	1
Property, plant and equipment	14	60,637,932	37,142,318
Intangible assets	15	66,171,543	55,893,929
Derivative financial instrument		507,737	-
Total non-current assets		146,976,149	112,176,209
Total assets		203,281,719	171,724,578
LIABILITIES			
Current liabilities			
Payables	16	6,136,692	9,560,443
Income in advance	17	46,183,958	34,130,317
Other liabilities		87,419	55,562
Provisions	18	2,277,210	1,888,215
Derivative financial instrument		-	485,233
Total current liabilities		54,685,279	46,119,770
Non-current liabilities			
Provisions	19	509,833	414,113
Income in advance	21	17,740,408	16,692,050
Derivative financial instrument		-	567,965
Total non-current liabilities		18,250,241	17,674,128
Total liabilities		72,935,520	63,793,898
Net assets		130,346,199	107,930,680
εουιτγ			
Contributed equity	22	39,039	39,039
Reserves		477,606	98,277
Retained earnings	23	129,829,554	107,793,364
Capital and reserves attributable to owners of AARNet Pty Ltd		130,346,199	107,930,680
Total equity		130,346,199	107,930,680

The above balance sheet should be read in conjunction with the accompanying notes.

## Statement of changes in equity

For the year ended 31 December 2013

31 December	31 December
2013	2012
\$	\$

Total equity at the beginning of the financial year	107,930,680	92,297,468
Changes in the fair value of available-for- sale financial assets, net of tax Total comprehensive income for the year	379,329 22,036,190	293,742 15,339,470
Total recognised income and expense for the year	22,415,519	15,633,212
Total equity at the end of the financial year	130,346,199	107,930,680

The above statement of changes in equity should be read in conjunction with the accompanying notes.

## Statement of cash flows

For the year ended 31 December 2013

	Notes	31 December 2013 \$	31 December 2012 \$
Cash flows from operating activities			
Receipts from customers (inclusive of goods and services tax) Payments to suppliers and employee		92,402,495	71,637,845
(inclusive of goods and services tax)		(46,925,572)	(42,212,090)
		45,476,923	
		(79)	(19)
Net cash inflow from operating activities	26	45,476,844	29,425,736
Cash flows from investing activities			
Payments for property, plant and equipment		(31,873,884)	(14,290,640)
Payments for intangible assets		(20,853,821)	(10,198,574)
Payments for available-for-sale financial assets		(6,682,372)	(1,734,633)
Payments for held-to-maturity investments		(4,124,126)	(4,575,837)
Proceeds from sale of available- for-sale financial assets		1,210,708	1,251,619
Proceeds from held-to-maturity investments		7,500,000	3,480,000
Dividends received Interest received		130,488 2,400,369	165,787 2,910,566
Net cash (outflow) from investing			
activities		(52,292,638)	(22,991,712)
Net cash inflow from financing activities		-	-
Net (decrease) increase in cash and cash equivalents Cash and cash equivalents at the		(6,815,794)	6,434,024
beginning of the financial year		33,059,351	26,625,327
Cash and cash equivalents at end of year	7	26,243,557	33,059,351

The above statement of cash flows should be read in conjunction with the accompanying notes.

## 1 Summary of significant accounting policies

The principal accounting policies adopted in the preparation of these financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated. The financial statements are for the entity AARNet Pty Ltd.

#### (a) Basis of preparation

These general purpose financial statements have been prepared in accordance with Australian Accounting Standards and interpretations issued by the Australian Accounting Standards Board and the *Corporations Act 2001*. AARNet Pty Ltd is a not-for-profit entity for the purpose of preparing the financial statements.

#### (i) New and amended standards adopted

AARNet has applied the following standards and amendments for first time in their annual reporting period commencing 1 January 2013:

- AASB 13 Fair Value Measurement and AASB 2011-8 Amendments to Australian Accounting Standards arising from AASB 13. The adoption of AASB 13 only affected the disclosures in the notes to the financial statements.
- AASB 119 Employee Benefits (September 2011) and AASB 2011-10 Amendments to Australian Accounting Standards arising from AASB 119 (September 2011). The impact of AASB 119 is not expected to be significant.
- AASB 2011-9 Amendments to Australian Accounting Standards - Presentation of Items of Other Comprehensive Income. The adoption of AASB 2011-9 only affected the disclosures in the notes to the financial statements.

#### (ii) Early adoption of standards

AARNet has not early adopted any standards that have been issued but are not yet effective.

#### (iii) Historical cost convention

These financial statements have been prepared under the historical cost convention, as modified by the revaluation of available-for-sale financial assets and contributed assets at fair value, and the recording of held-to-maturity financial assets at amortised cost.

#### (iv) Critical accounting estimates

The preparation of financial statements requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the company's accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements, are disclosed in note 3.

#### (b) Foreign currency translation

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the income statement.

#### (c) Revenue recognition

Revenue from the provision of telecommunications services is recognised upon delivery of the services to the users.

Infrastructure construction revenue for projects where the infrastructure becomes the property of the customer is recognised in accordance with the percentage of completion method unless the outcome cannot be reliably estimated. Where the outcome of a contract cannot be reliably estimated, contract costs are recognised as revenue to the extent of costs incurred.

Revenue for projects which involve the construction of infrastructure and the subsequent delivery of services across that infrastructure, where the infrastructure becomes the property of AARNet (unless the project involves contributions of assets) is recognised over the period of the agreement for the provision of those telecommunications services. We refer to this style of arrangement as a Service Agreement.

Contributed assets (including the contribution of funds by government agencies or other persons to facilitate the construction of infrastructure for the AARNet network) are recognised at fair value when title and control of the asset passes or when the conditions to receive or retain funding are met.

Interest income is recognised as it accrues and dividends are recognised as revenue when the right to receive payment is established.

Amounts disclosed as revenue are net of any discounts allowed and taxes paid. Funds received in advance of the revenue recognition point, are recorded as a liability as income in advance.

#### (d) Income tax

AARNet is exempt from income tax under Section 50-5 of the Income Tax Assessment Act 1997. AARNet's tax status was subject to review by the ATO during 2008, and its tax exempt status was confirmed.

#### (e) Leases

Leases of property, plant and equipment where AARNet, as lessee, has substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalised at the lease's inception at the fair value of the leased property or, if lower, the present value of the minimum lease payments. The corresponding rental obligations, net of finance charges, are included in other short-term and long-term payables. Each lease payment is allocated between the liability and finance cost. The finance cost is charged to the income statement over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The property, plant and equipment acquired under finance leases is depreciated over the

### (e) Leases (continued)

asset's useful life or over the shorter of the asset's useful life and the lease term if there is no reasonable certainty that AARNet will obtain ownership at the end of the lease term.

Leases in which a significant portion of the risks and rewards of ownership are not transferred to AARNet as lessee are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to the income statement on a straight-line basis over the period of the lease.

### (f) Impairment of assets

Assets that are subject to depreciation or amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. As a not-for-profit entity, value in use is calculated on the basis of the depreciated replacement cost, which represents the current replacement cost of an asset less, where applicable, accumulated depreciation calculated on the basis of such cost to reflect the already consumed or expired future economic benefits of the asset.

For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash generating units).

The company has only one cash generating unit.

### (g) Cash and cash equivalents

For the purpose of presentation in the statement of cash flows, cash and cash equivalents includes cash on hand, deposits held at call with financial institutions, other short-term, highly liquid investments with original maturities of three months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value, and bank overdrafts.

### (h) Trade receivables

Trade receivables are recognised initially at fair value and subsequently measured at amortised cost, less provision for impairment. Trade receivables are due for settlement no more than 30 days from the date of recognition.

Collectability of trade receivables is reviewed on an ongoing basis. Debts which are known to be uncollectible are written off. A provision for impairment of trade receivables is established when there is objective evidence that AARNet will not be able to collect all amounts due according to the original terms of the receivables. Significant financial difficulties of the debtor, probability that the debtor will enter bankruptcy or financial reorganisation, and default or delinquency in payments (more than 60 days overdue) are considered indicators that the trade receivable is impaired. The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the original effective

interest rate. Cash flows relating to short-term receivables are not discounted if the effect of discounting is immaterial. The amount of the provision is recognised in the income statement in other expenses.

## (i) Investments and other financial assets *Classification*

AARNet classifies its financial assets in the following categories: loans and receivables, held-to-maturity investments and available-for-sale financial assets. The classification depends on the purpose for which the investments were acquired. Management determines the classification of its investments at initial recognition and, in the case of assets classified as held-to-maturity, re-evaluates this designation at the end of each reporting date.

#### (i) Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are included in current assets, except for those with maturities greater than 12 months after the reporting period which are classified as non-current assets. Loans and receivables are included in current receivables (note 8) and other non-current receivables (note 11) in the balance sheet.

#### (ii) Held-to-maturity investments

Held-to-maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturities that management has the positive intention and ability to hold to maturity. If AARNet were to sell other than an insignificant amount of held-to-maturity financial assets, the whole category would be tainted and reclassified as available-for-sale. Held-to-maturity financial assets are included in non-current assets, except for those with maturities less than 12 months from the end of the reporting period, which are classified as current assets.

### (iii) Available-for-sale financial assets

Available-for-sale financial assets, comprising principally marketable equity securities, are non-derivatives that are either designated in this category or not classified in any of the other categories. They are included in non-current assets unless the investment matures or management intends to dispose of the investment within 12 months of the end of the reporting period. Investments are designated as available-for-sale if they do not have fixed maturities and fixed or determinable payments and management intends to hold them for the medium to long-term.

#### Recognition and derecognition

Purchases and sales of financial assets are recognised on the date on which AARNet commits to purchase or sell the asset. Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and AARNet has transferred substantially all the risks and rewards of ownership.

When securities classified as available-for-sale are sold, the accumulated fair value adjustments recognised in other comprehensive income are reclassified to profit or loss as gains and losses from investment securities.

#### Measurement

At initial recognition, AARNet measures a financial asset at its fair value plus transaction costs that are directly attributable to the acquisition of the financial asset.

Loans and receivables and held-to-maturity investments are subsequently carried at amortised cost using the effective interest method.

Available-for-sale financial assets are subsequently carried at fair value.

#### Impairment

AARNet assesses at the end of each reporting period whether there is objective evidence that a financial asset or a group of financial assets is impaired. A financial asset or a group of financial assets is impaired and impairment losses are incurred only if there is objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a 'loss event') and that loss event (or events) has an impact on the estimated future cash flows of the financial asset or group of financial assets that can be reliably estimated.

#### (i) Assets carried at amortised cost

If a held-to-maturity investment has a variable interest rate, the discount rate for measuring any impairment loss is the current effective interest rate determined under the contract. As a practical expedient, AARNet may measure impairment on the basis of an instrument's fair value using an observable market price.

#### (ii) Assets classified as available-for-sale

If there is objective evidence of impairment for available-for-sale financial assets, the cumulative loss - measured as the difference between the acquisition cost and the current fair value, less any impairment loss on that financial asset previously recognised in profit or loss - is removed from equity and recognised in profit or loss.

Impairment losses on equity instruments that were recognised in profit or loss are not reversed through profit or loss in a subsequent period.

If the fair value of a debt instrument classified as available-forsale increases in a subsequent period and the increase can be objectively related to an event occurring after the impairment loss was recognised in profit or loss, the impairment loss is reversed through profit or loss.

#### (j) Derivatives and hedging activities

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured to their fair value at each reporting date.

AARNet has entered into forward exchange contracts which are economic hedges for foreign currencies to be traded at a future date but do not satisfy the requirements for hedge accounting.

These contracts are fair valued by comparing the contracted rate to the current market rate for a contract with the same remaining period to maturity. Any changes in fair values are taken to the income statement immediately.

#### (k) Fair value estimation

The fair value of financial assets and financial liabilities are estimated for recognition and measurement or for disclosure purposes.

The carrying value less impairment provision of trade receivables and payables are assumed to approximate their fair values due to their short-term nature. The fair value of financial liabilities for disclosure purposes is estimated by discounting the future contractual cash flows at the current market interest rate that is available to AARNet for similar financial instruments.

#### (I) Property, plant and equipment

Property, plant and equipment is stated at historical cost less depreciation. Historical cost includes expenditure that is directly attributable to the acquisition of the items.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to AARNet and the cost of the item can be measured reliably.

Property, plant and equipment is depreciated using the straight-line method to allocate their cost, net of their residual values, over their estimated useful lives, as follows:

- > Leasehold improvements> Office equipment3 years
- > Leased communication assets 5 6 years
- > Leased office equipment 3 years
- > Communication assets 3 20 years
- > Software 2 3 years

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period; such adjustments may result in a revised useful life shorter than that shown above.

An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount (note 1(f)).

Gains and losses on disposals are determined by comparing proceeds with carrying amount. These are included in the income statement.

#### (m) Intangible assets

AARNet's intangible assets are indefeasible rights to use (IRU) capacity of traffic paths, which have been amortised from the date they were available for service and will continue to be amortised over the period of the right, which varies from 15 to 20 years. These are considered operating leases, and additions represent amounts paid as per the lease agreement.

#### (n) Trade and other payables

These amounts represent liabilities for goods and services provided to AARNet prior to the end of financial year which are unpaid. The amounts are unsecured and are usually paid within 30 days of recognition.

#### (o) Employee benefits

#### (i) Wages and salaries and annual leave

Liabilities for wages and salaries, including non-monetary benefits and leave entitlements expected to be settled within 12 months of the reporting date are recognised in other payables in respect of employees' services up to the reporting date and are measured at the amounts expected to be paid when the liabilities are settled.

#### (ii) Other long-term employee benefit obligations

The liability for leave entitlements or other employee benefits which are not expected to be settled within 12 months after the end of the period in which the employees render the related service is recognised in the provision for employee benefits and measured as the present value of expected future payments to be made in respect of services provided by employees up to the end of the reporting period using the projected unit credit method. Consideration is given to expected future wage and salary levels, experience of employee departures and periods of service. Expected future payments are discounted using market yields at the end of the reporting period on national government bonds with terms to maturity and currency that match, as closely as possible, the estimated future cash outflows.

#### (p) Goods and Services Tax (GST)

Revenues, expenses and assets are recognised net of the amount of associated GST, unless the GST incurred is not recoverable from the Australian Taxation Office (ATO). In this case it is recognised as part of the cost of acquisition of the asset or as part of the expense.

Receivables and payables (except accrued expenses) are stated with the amount of GST included.

The net amount of GST recoverable from, or payable to, the ATO is included as a current asset or liability in the Balance Sheet.

Cash flows are included in the Statement of Cash Flows on a gross basis. The GST component of cash flows arising from investing and financing activities which are recoverable from, or payable to, the ATO are classified as operating cash flows.

#### (q) Provisions

Provisions for make good costs on leased premises are recognised when: AARNet has a present legal or constructive obligation as a result of past events; it is more likely than not that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated.

#### (r) Comparative figures

Comparative figures have been adjusted to conform to the presentation of the financial year, where required.

#### (s) New accounting standards and interpretations

Other than the new standards adopted per note 1 (a), there are no other standards that are not yet effective and that are expected to have a material impact on the entity in the current reporting period.

### 2 Commitments

(a) Expenditure commitments

	2013	2012
	\$	\$
Within one year	4,537,450	11,937,524
Later than one year but not later than		
five years	2,798,020	4,471,209
Later than five years	601,511	741,543
	7,936,981	17,150,276

(b) Lease commitments: AARNet as lessee	31 December 2013 \$	31 December 2012 \$
Commitments for minimum lease payments in relation to non-cancellable operating leases are payable as follows:		
Within one year	13,908,766	11,792,264
Later than one year but not later than	71. 777 700	F0 F76 707
five years	34,733,706	50,576,303
Later than five years	32,538,522	41,214,051
Commitments not recognised in the		
financial statements	81,180,994	103,582,618

31 December 31 December

### 3 Critical accounting estimates and judgements

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that may have a financial impact on the entity and that are believed to be reasonable under the circumstances.

#### Critical accounting estimates and assumptions

AARNet makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

#### (i) Useful life of intangible assets

The Director's have assumed in the ordinary course of business that AARNet's customers will continue to use AARNet's services into the forseeable future. The useful economic lives assigned for intangible assets are based on the contractual terms agreed for each indefeasible right to use.

#### (ii) Useful life of assets

AARNet is an owner of a significant amount of assets and infrastructure. Estimates are made as to the useful life of these assets which can affect the amount of depreciation and amortisation expense during the year.

#### (iii) Assets at fair value

AARNet carries its available-for-sale financial assets at fair value with changes in the fair value recognised in reserves. It obtains market valuations at least annually.

### 4 Other Income and NRN Contributions

Included in Other Income are the following significant amounts: Payroll Tax Refund \$1,093,799 (2012: Nil), Gain on Foreign Currency Contracts: \$2,040,658 (2012: loss of \$1,122,599).

During 2013 the Company began to apply to the states and territories in which it operates for exemption from payroll tax. The last of these applications was lodged after the end of the financial year. The amount shown in other income represents the refunds received during 2013 from those jurisdictions that granted exemption and provided refunds of taxes previously paid.

The company hedges a significant proportion of its exposure to foreign currency movements (refer note 6) and does not apply hedge accounting; note 1(j) sets out the accounting policy adopted with respect to derivatives and hedging activities. During 2013 movements in the Australian dollar produced a gain on the hedging instruments held during and as at the end of the year of \$2,040,658. This amount represents a net improvement of \$3,163,257 over the equivalent item recorded in 2012.

In addition, the Company benefited again during 2013 from receipts under the National Research Network Program (an initiative of the Australian Government conducted as part of the Super Science Initiative). Although the funds received under this program are expended on construction of network infrastructure, equipment and related activities, the receipts are accounted for as a contribution and recognised as income (refer note 1(c)). The amount of such income recognised in 2013 was \$10,784,771 (2012: \$7,505,320).

These amounts are not the only material or variable components of Net Income recognised by the Company in 2013 or 2012. They do represent a significant component of the Net Income recorded by the Company during 2013 and are also a material factor in the increase in Net Income recorded in 2013 over 2012.

### 5 Expenses

	31 December	31 December
	2013	2012
	\$	\$
Depreciation		
Office equipment	830,560	946,446
Leasehold improvements	188,698	162,994
Communication assets	4,519,752	2,748,072
Software	57,222	68,936
Leased communication assets	555,807	573,085
Total depreciation	6,152,039	4,499,533
Office equipment Leasehold improvements Communication assets Software Leased communication assets	830,560 188,698 4,519,752 57,222 555,807	946,44( 162,994 2,748,072 68,93( 573,08)

#### Amortisation

AMONISATION		
Intangibles – Indefeasible Rights to Use traffic paths	10,508,494	6,636,781
Total amortisation	10,508,494	6,636,781
Total depreciation and amortisation	16,660,533	11,136,314
Finance costs		
Interest and finance charges paid/payable	79	19
Foreign exchange losses	9,075	94,864
Loss on available-for-sale financial assets	128,318	72,235
Loss on disposal of assets	1,002	1,923
Amortised interest expense	49,655	48,118
Rental expense relating to operating leases		
Minimum lease payments - premises	1,016,550	956,594
Superannuation expense	1,386,596	1,206,938

## 6 Financial risk management

AARNet's activities expose it to a variety of financial risks: market risk (including currency risk, interest rate risk and price risk), credit risk and liquidity risk. AARNet's overall risk management program focuses on liquidity and seeks to minimise potential adverse effects on the financial performance of AARNet. AARNet uses derivative financial instruments such as foreign exchange contracts to hedge certain risk exposures. AARNet uses different types of risk to which it is exposed. These methods include sensitivity analysis in the case of interest rate, foreign exchange and other price risks, and aging analysis for credit risk.

Risk management is carried out by the Chief Executive Officer (CEO) and the Chief Financial Officer (CFO) under policies approved by the Board of Directors. The CEO and CFO identify, evaluate and hedge financial risks in close co-operation with AARNet's operating management. Through the Audit, Risk & Finance Committee, the Board provides principles for overall risk management, as well as policies covering specific areas, such as foreign exchange risk and the use of derivative financial instruments.

#### (a) Market risk

#### (i) Foreign exchange risk (currency risk)

AARNet operates internationally and is exposed to foreign exchange risk arising from currency exposures, primarily with respect to the US dollar (USD), and to a smaller extent, to the Euro (EUR).

AARNet holds foreign currency and enters into forward exchange contracts to manage foreign exchange risk.

Foreign exchange risk arises from future committed expenditure. The risk is measured using sensitivity analysis and cash flow forecasting.

AARNet's risk management policy is to hedge at least 60% of anticipated short-term cash flows (mainly for the purchase of capacity from the US) in USD. AARNet currently has monthly requirements in excess of USD0.5m, primarily for the purchase of capacity from the US to Australia and for equipment purchases. These requirements are expected to rise over time.

At year end, AARNet held USD0.39m (AUD0.44m) in USD denominated bank accounts and EUR0.22m (AUD0.34m) in a EUR denominated bank account as part of its strategy to minimise the financial effects of foreign currency fluctuations. Through the Audit, Finance & Risk Committee, AARNet's Board monitors the company's hedging strategy on a continuing basis.

#### Sensitivity

At 31 December 2013, had the AUD weakened/strengthened by 10% against the USD and the EUR with all other variables held constant, AARNet's net income for the year would have been \$256,000 lower/\$209,000 higher [2012: \$189,000 lower/\$287,000 higher], mainly as a result of foreign exchange losses/gains on translation of USD and EUR denominated cash at bank. Equity would have changed by the same amounts as net income had the AUD weakened/strengthened by 10% against the USD.

#### (ii) Cash and held-to-maturity investments (interest rate risk) Cash

AARNet's exposure to changes in interest rates is to the extent of its cash at bank and on deposit. At 31 December 2013, if interest rates had changed by -/+1% (100 basis points) from year-end rates with all other variables held constant, Net Income for the year would have been \$255,000 lower/higher (2012: \$321,000 lower/higher), as a result of lower/higher interest income from cash and cash equivalents. Total equity would have changed by the same amounts.

#### Held-to-maturity investments

At 31 December 2013, if interest rates had changed by -/+1% (100 basis points) from year-end rates with all other variables held constant, Net Income for the year would have been \$116,000 lower/higher (2012: \$140,000) as a result of lower/higher interest income from held-to-maturity investments. Equity would have changed by the same amounts.

#### (iii) Available-for-sale assets (price risk)

Available-for-sale financial assets are comprised of equities and bonds listed on the ASX and hybrid investments. At 31 December 2013, had the ASX uniformly been -/+1% lower/higher with all other variables held constant, Total Comprehensive Income for the year would have been \$105,000 lower/higher (2012: \$46,000) as a result of lower/higher income from available-for-sale financial assets.

## 6 Financial risk management (continued)

#### (a) Market risk (continued)

#### Summarised sensitivity analysis

The following table summarises the sensitivity of the AARNet's financial assets and financial liabilities to interest rate risk, foreign exchange risk and other price risk.

			Interes	t rate risk			Foreign ex	xchange ri	 sk		Other p	orice risk	
		-1	00bps	+10	Obps	-1	10%	+]	0%	-1	  %	+	1%
31 December 2013	Carrying amount	Profit	Other Equity	Profit	Other Equity	Profit	Other Equity	Profit	Other Equity	Profit	Other Equity	Profit	Other Equity
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Financial assets													
Cash and cash													
equivalents	26,243,557	(254,677)	(254,677)	254,677	254,677	(85,933)	(85,933)	70,309	70,309	-	-	-	-
Accounts													
receivable	15,638,632	-	-	-	-	-	-	-	-	-	-	-	-
Held-to-maturity													
investments, term deposits	5,124,125	(51,241)	(51,241)	51.241	51.241	_	_	_	_	_	_	_	_
Held-to-maturity		(J1,241)	(J1,241)	J1,241	J1,241	_	_	_	_	_	_	_	_
investments,													
floating rate													
notes	6,500,000	(65,000)	(65,000)	65,000	65,000	-	-	-	-	-	-	-	-
Available-for-sale													
financial assets	10,454,346	-	-	-	-	-	-	-	- (	104,543) (	104,543)	104,543	104,543
Other assets	109,877	-	-	-	-	-	-	-	-	-	-	-	-
Accrued income	1,656,830	-	-	-	-	-	-	-	-	-	-	-	-
Derivative													
financial	0074.63					(100 710)	(100 710)	00 700	00 700				
instrument	987,461	-	-	-	-	(109,718)	[109,718]	89,769	89,769	-	-	-	-
Financial liabilities													
Trade payables	3,590,388					(60.097)		49.170	49.170				
		-	-	-	-	[00,097]	[00,097]	49,170	49,170	-	-	-	-
Other liabilities	3,214,461								-				
Total increase/													
(decrease)		(370,918)	(370,918)	370,918	370,918	[255,748][	[255,748]	209,248	209,248 (	104,543) (1	104,543)	104,543	104,543

## 6 Financial risk management (continued)

### (a) Market risk (continued)

Summarised sensitivity analysis (continued)

			Interest	t rate risk			Foreign ex	xchange ri	sk		Other p	rice risk	
		-1	00bps	+10	обря Обря	 -	10%	+1	0%		-1%	+	1%
31 December 2012	Carrying amount	Profit	Equity	Profit	Equity	Profit	Equity	Profit	Equity	Profit	Equity	Profit	Equity
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Financial assets													
Cash and cash													
equivalents	33,059,344	(320,992)	(320,992)	320,992	320,992	(43,656)	(43,656)	167,538	167,538	-	-	-	-
Accounts													
receivable	13,804,672	-	-	-	-	-	-	-	-	-	-	-	-
Held-to-maturity													
investments,	F 000 000	(50.000)	(50.000)	50.000	50.000								
term deposits	5,000,000	(50,000)	(50,000)	50,000	50,000	-	-	-	-	-	-	-	-
Held-to-maturity													
investments, floating rate													
notes	9.000.000	(90,000)	(90.000)	90.000	90,000	-	-	-	_	-	-	-	-
Available-for-sale		(50,000)	(30,000)	50,000	50,000								
financial assets	2,111,825	-	-	-	-	-	-	-	-	(45,898)	(45.898)	45,898	45.898
Other assets	147,279	-	-	-	-	-	-	-	-	-	-	-	-
Accrued income	3,555,365	-	-	-	-	-	-	-	-	-	-	-	-
Financial													
liabilities													
Derivative													
financial													
instrument	1,053,197	-	-	-	-	117,053	117,053	(95,771)	(95,771)	-	-	-	-
Trade payables	5,648,516	-	-	-	-	(28,512)	(28,512)	23,328	23,328	-	-	-	-
Other liabilities	4,249,931	-	-	-	-	-	-	-	-	-	-	-	-
Total increase/ (decrease)		(1160 002)	(460,992)	1160 002	1160 002	44,885	44,885	95,095	05 005	(115 800)	(45,898)	45,898	45,898

## 6 Financial risk management (continued)

#### (b) Credit risk

Credit risk arises from AARNet's holdings of cash and cash equivalents, term deposit, corporate bonds and loan notes, shares, hybrid securities and derivative financial instruments. Further credit risk arises from credit exposures to customers in the form of outstanding receivables and committed transactions.

In terms of bank deposits and derivative financial instruments, AARNet deals principally with major Australian banks. In terms of investments in equities, hybrid loan notes and bonds, AARNet has an approved investment policy which stipulates minimum ratings or other criteria for investment funds. Investments in such securities also follow recommendations from a licensed investment advisor.

AARNet's principal customers are Australian Universities and the CSIRO, who are also its shareholders. Other non-shareholder customers are typically government funded or partially government funded institutions. AARNet also minimises credit risk by invoicing for services in advance for a significant portion of its income.

### (c) Liquidity risk

Prudent liquidity risk management implies maintaining sufficient cash available to meet the needs of the business.

Management monitors rolling forecasts of AARNet's liquidity on the basis of expected cash flow. AARNet's Board periodically considers longer range financial forecasts (5+ years) provided to the Board during the normal course of its deliberations. The Board also considers the expenditure commitments disclosed in note 2.

#### (d) Fair value measurements

AARNet measures and recognises the following assets and liabilities at fair value on a recurring basis:

- Available-for-sale financial assets; and
- Derivative financial instruments.

AASB 13 Fair Value Measurement requires disclosure of fair value measurements by level of the following fair value measurement hierarchy:

- quoted prices (unadjusted) in active markets for identical assets or liabilities (level 1);
- (b) inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly or indirectly (level 2); and
- (c) inputs for the asset or liability that are not based on observable market data (unobservable inputs) (level 3).

The following table presents the company's assets and liabilities measured and recognised at fair value at 31 December 2013 and 31 December 2012:

## 6 Financial risk management (continued)

### (d) Fair value measurements (continued)

31 December 2013	Notes	Level 1 \$	Level 2 \$	Level 3 \$	Total \$
Assets					
Derivative financial instrument Available-for-sale financial assets		-	987,461	-	987,461
Equity securities	12	4,016,042	_	-	4,016,042
Bonds	12	6,438,304	-	-	6,438,304
Total assets		10,454,346	987,461	-	11,441,807
31 December 2012	Notes	Level 1	Level 2	Level 3	Total
		\$	\$	\$	\$
Assets					
Available-for-sale financial assets					
Equity securities	12	2,111,826	-	-	2,111,826
Debt securities	12	2,477,995	-	-	2,477,995
Total assets		4,589,821	-	-	4,589,821
Liabilities					
Derivative financial instrument		-	1,053,198	-	1,053,198
Total liabilities		-	1,053,198	-	1,053,198

The fair value of financial instruments traded in active markets (such as available-for-sale financial assets) is based on quoted market prices at the end of the reporting period. These instruments are included in level 1.

The fair value of financial instruments that are not traded in an active market (such as derivative financial instruments) is determined using valuation techniques. These valuation techniques maximise the use of observable market data where it is available and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2.

### 7 Current assets – Cash and cash equivalents

	31 December	31 December
	2013	2012
	\$	\$
Cash at bank and in hand (AUD)	19,489,926	18,564,814
Cash at bank (USD and EUR)	773,401	994,031
Deposits at call - all denominated in AUD	5,980,230	13,500,506
	26,243,557	33,059,351

#### (a) Cash at bank and on hand

Cash at bank and on hand are held at interest rates varying between 0.03% and 2.40% (2012: 0.05% and 3.60%). During the year, cash at bank and on hand is transferred to term deposits to meet liquidity requirements.

#### (b) Deposits at call

Interest bearing deposits at call attracted interest rates between 2.35% and 4.65% (2012: 3.50% and 6.00%). These deposits have an average maturity of 66 days.

#### (c) Bank guarantee and credit facilities

AARNet has a \$2,000,000 Bank Guarantee Facility provided by the National Australia Bank. AARNet has provided bank guarantees for \$239,380 for the AARNet Sydney office, \$84,977 for the AARNet Brisbane office, and \$60,000 for the AARNet Melbourne office. AARNet had an unsecured credit card facility totalling \$200,000 during the year.

### 8 Current assets – Receivables

	31 December	31 December
	2013	2012
	\$	\$
Trade receivables	15,638,633	13,804,672
Other debtors	109,877	147,279
Prepayments	2,764,353	1,479,290
	18,512,863	15,431,241

As at 31 December 2013, trade receivables of \$69,839 (2012: \$0) were past due but not impaired or considered uncollectable. These amounts have been outstanding for more than 90 days. These relate to a number of customers for whom there is no history of default.

#### (a) Other debtors

These amounts generally arise from transactions outside the usual operating activities of AARNet. Interest is not normally charged.

#### (b) Fair value

Due to the short-term nature of these receivables, their carrying amount is assumed to approximate their fair value.

### 9 Current assets – Held-to-maturity investments

	31 December 2013 \$	31 December 2012 \$
Bonds Term deposits	5,288,471 4,124,125	2,502,412 5,000,000
	9,412,596	7,502,412

## 10 Current assets – Accrued income

	31 December 2013 \$	31 December 2012 \$
Infrastructure projects Other	378,595 935,941	2,921,447 351,208
Interest on cash and cash equivalents and held-to-maturity investments	342,295	282,710
	1,656,830	3,555,365

## 13 Non-current assets – Held-to-maturity investments

	31 December	31 December
	2013	2012
	\$	\$
Bonds	8,121,072	13,418,274
Term deposits	1,000,000	1,000,000
	9,121,072	14,418,274

## 11 Non-current assets – Receivables

	31 December	31 December
	2013	2012
	\$	\$
Other debtors	-	109,877
Prepayments	83,518	21,989
	83,518	131,866

## 12 Non-current assets – Available-for-sale financial assets

	31 December	31 December
	2013	2012
	\$	\$
Equity securities	4,016,042	2,111,826
Bonds	6,438,304	2,477,995
	10,454,346	4,589,821

### 14 Non-current assets - Property, plant and equipment

	Leasehold	Office	Leased communication	Communication		
	improvements	equipment	assets	assets	Software	Total
	\$	\$	\$	\$	\$	\$
At 1 January 2012						
Cost or fair value	1,935,241	3,582,279	16,078,594	30,272,289	695,265	52,563,668
Accumulated depreciation	(880,984)	(1,600,114)	(14,949,702)	(12,673,546)	(644,225)	(30,748,571)
Net book amount	1,054,257	1,982,165	1,128,892	17,598,743	51,040	21,815,097
Year ended 31 December 2012						
Opening net book amount	1,054,257	1,982,165	1,128,892	17,598,743	51,040	21,815,097
Additions	60,014	161,454	-	19,487,240	119,969	19,828,677
Disposals	-	(1,923)	-	-	-	(1,923)
Depreciation charge	(162,994)	(946,446)	(573,085)	(2,748,072)	(68,936)	(4,499,533)
Closing net book amount	951,277	1,195,250	555,807	34,337,911	102,073	37,142,318
At 31 December 2012						
Cost or fair value	1,995,255	3,740,674	16,078,594	49,759,529	815,234	72,389,286
Accumulated depreciation	(1,043,978)	(2,545,424)	(15,522,787)	(15,421,618)	(713,161)	(35,246,968)
Net book amount	951,277	1,195,250	555,807	34,337,911	102,073	37,142,318
Year ended 31 December 2013						
Opening net book amount	951,277	1,195,250	555,807	34,337,911	102,073	37,142,318
Additions	24,823	381,370	-	29,242,462	-	29,648,655
Disposals	-	-	-	(1,002)	-	(1,002)
Depreciation charge	(188,698)	(830,560)	(555,807)	(4,519,752)	(57,222)	(6,152,039)
Closing net book amount	787,402	746,060	-	59,059,619	44,851	60,637,932
At 31 December 2013						
Cost	2,020,078	4,116,610	16,078,594	78,881,719	815,234	101,912,235
Accumulated depreciation	(1,232,676)	(3,370,550)	(16,078,594)	(19,822,100)	(770,383)	(41,274,303)
Net book amount	787,402	746,060	-	59,059,619	44,851	60,637,932

#### (a) Assets in the course of construction

The carrying amounts of the assets disclosed above include the following expenditure recognised in relation to property, plant and equipment which is in the course of construction:

	31 December	31 December
	2013	2012
	\$	\$
Communication assets	18,004,434	12,050,048
Office equipment	46,428	-
Total assets in the course of construction	18,050,862	12,050,048

### 15 Non-current assets – Intangible assets

	Indefeasible right to use of capacity of traffic path \$	Total \$
At 1 January 2012		
Total payments	89,637,333	89,637,333
Accumulated amortisation on a straight line basis	(37,372,911)	(37,372,911)
Net book amount	52.264.422	
Year ended 31 December 2012	52,201,122	52,201,122
Opening net book amount	52,264,422	52,264,422
Additions	10,266,288	10,266,288
Amortisation charge	(6,636,781)	(6,636,781)
Closing net book amount	55,893,929	55,893,929
Total payments	99,903,621	99,903,621
Accumulated amortisation on a straight line basis	(44,009,692)	(44,009,692)
Net book amount	55,893,929	55,893,929
Year ended 31 December 2013		
Opening net book amount	55,893,929	55,893,929

Obeulug uet book amonut	55,895,929	22,882,858
Additions	20,786,108	20,786,108
Amortisation charge	(10,508,494)	(10,508,494)
Closing net book amount	66,171,543	66,171,543
At 31 December 2013		
Cost	120,689,727	120,689,727
Accumulated amortisation on a straight		
line basis	(54,518,184)	(54,518,184)
Net book amount	66,171,543	66,171,543

During the year, additions to intangible assets totalled \$20,786,108. These additions were the result of recognising further payments for Indefeasible Rights to Use traffic paths.

### 16 Current liabilities – Payables

	31 December	31 December
	2013	2012
	\$	\$
Trade payables and other accruals	6,136,692	9,560,443

Trade payables and accruals are expected to be paid within 30 days.

### 17 Current liabilities – Income in advance

	31 December 2013 \$	31 December 2012 \$
Infrastructure projects Other Infrastructure service fees	12,630,362 4,703,976 2,024,412	6,080,427 1,052,335 2,566,038
Subscriptions	26,825,208 46,183,958	24,431,517 34,130,317

### 18 Current liabilities – Provisions

	31 December	31 December
	2013	2012
	\$	\$
Employee benefits	2,277,210	1,888,215

#### 19 Non-current liabilities – Provisions

	31 December	31 December
	2013	2012
	\$	\$
Employee benefits	299,088	197,702
Make good on leased premises	210,745	216,411
	509,833	414,113

#### (a) Movements in provisions

Movements in each class of provision during the financial year, other than employee benefits, are set out below:

	Make good on leased premises	Total
2017	\$	\$
2013		
Non-current liabilities – Provisions		
Carrying amount at start of year	216,411	216,411
Reduction in provision recognised	(5,666)	(5,666)
Carrying amount at end of year	210,745	210,745
	Make good on leased premises ¢	Total
	Ψ	\$
2012	¢	\$
2012 Non-current liabilities – Provisions	¢	\$
	م 219,443	\$ 219,443
Non-current liabilities – Provisions	219,443 (3,032)	Ŧ

### 20 Non-current liabilities – Retirement benefit obligations

#### Superannuation plan

Contributions for certain of AARNet's employees are held by the UniSuper Defined Benefit Division (the DBD) which is a defined benefit plan under Superannuation Law, but is considered to be a defined contribution plan under Accounting Standard AASB 119.

As at 30 June 2013, the assets of the DBD in aggregate were estimated to be \$691 million in deficiency of vested benefits (\$770 million after allowing for various reserves). The vested benefits are benefits which

are not conditional upon continued membership (or any factor other than leaving the service of the participating institution) and include the value of indexed pensions being provided by the DBD.

As at 30 June 2013 the assets of the DBD in aggregate were estimated to be \$861 million above accrued benefits (\$782 million after allowing for various reserves). The accrued benefits have been calculated as the present value of expected future benefit payments to members and indexed pensioners which arise from membership of UniSuper up to the reporting date.

The vested benefit and accrued benefit liabilities were determined by the Fund's actuary, Russell Employee Benefits, using the actuarial demographic assumptions outlined in their report dated 14 November 2013. The financial assumptions used were:

	Vested benefits	Accrued benefits
	ρ.a.	ρ.ə.
Gross of tax investment return - DBD		
pensions	6.10%	7.80%
Gross of tax investment return – commercial rate indexed pensions	3.70%	3.70%
Net of tax investment return – non		
pensioner members	5.50%	7.00%
Consumer Price Index	2.75%	2.75%
Inflationary salary increases long-term	3.75%	3.75%

Assets have been included at their net market value i.e. allowing for realisation costs.

Clause 34 of the UniSuper Trust Deed provides a mechanism for reducing members' benefits, if after initially falling below specified threshold levels, and after a period of at least four years, the Accrued Benefit Index (ABI) and the Vested Benefit Index (VBI) are below those thresholds (100% and 95% respectively).

At 30 June 2013 the VBI was 94.7% and the ABI was 106.0%. As a result of the VBI being less than 95% at 30 June 2013, the monitoring process set out in Clause 34 has been commenced. The Clause 34 process was also initiated following the report on the actuarial investigation as at 31 December 2008, 30 June 2011 and 30 June 2012.

Following the end of the monitoring period commenced in relation to the 31 December 2008 actuarial investigation, the UniSuper Limited Board made a decision not to reduce accrued benefits but to reduce the rate at which benefits accrue in respect of the DBD membership after 1 January 2015.

AARNet is not legally obliged to make additional contributions to the DBD in respect of any deficiency within the DBD. Accordingly, no provision has been made in AARNet's accounts for any potential shortfall in the DBD.

### 21 Non-current liabilities – Income in advance

	31 December	31 December
	2013	2012
	\$	\$
Infrastructure service fees	11,757,123	10,153,415
Infrastructure projects	2,692,057	2,935,315
Other deferred income	3,291,228	3,603,320
	17,740,408	16,692,050

### 22 Contributed equity

	31 December	31 December	31 December	31 December
	2013	2012	2013	2012
	Shares	Shares	\$	\$
Fully paid	78	78	39,039	39,039
	78	78	39,039	39,039

#### (a) Movements in ordinary share capital

Date	Details	Number of shares	\$
1 January 2012	Opening balance	78	39,039
31 December 2012	Balance	78	39,039
31 December 2013	Balance	78	39,039

Holders of ordinary shares are entitled to one vote per share on resolutions put before the members. Holders of ordinary shares are not entitled to dividends and have no right to receive any distribution during a winding up.

### 23 Retained earnings

#### Retained earnings

Movements in retained earnings were as follows:

	31 December	31 December
	2013	2012
	\$	\$
Balance 1 January	107,793,364	92,453,894
Net profit for the year	22,036,190	15,339,470
Balance 31 December	129,829,554	107,793,364

#### The specified Directors of AARNet Pty Ltd during the financial year were: Chairman – non-executive Emeritus Professor GR Sutton AO, Independent Director (ii) Executive Directors Mr C Hancock CEO (iii) Non-executive Directors Professor MN Barber Mr M Bailey (appointed 30 April 2013) Mr OJ Barrett, Independent Director Professor L Kristjanson Mr P Nikoletatos Mr N Poole (resigned 31 December 2013) Mr JF Rohan, Independent Director Dr I Tebbett Emeritus Professor MS Wainwright AM. Independent Director Professor IR Young AO

24 Key management personnel disclosures

#### Key management personnel compensation

The key management personnel are those who had authority and responsibility for planning, directing and controlling the activities of AARNet, directly or indirectly, during the year. The remuneration for key management personnel including directors is as follows:

	31 December	31 December
	2013	2012
	\$	\$
Short-term employee benefits	1,883,616	1,731,422
Post-employment benefits	241,733	176,996
	2,125,349	1,908,418

#### Transactions with key management personnel

A director, Emeritus Professor MS Wainwright AM, is Chair of Smart Services CRC Pty Ltd. AARNet owns one share and makes in-kind contributions to this company. The CEO, Mr C Hancock, is also a Director of this company.

A director, Mr P Nikoletatos, is Vice President of the Council of Australian University Directors of Information Technology (CAUDIT) to which AARNet provides payroll bureau services. AARNet receives no consideration for this activity.

Other directors represent, act for, or hold offices at certain of AARNet's shareholders. AARNet provides services to these shareholders on arm's length terms.

## 25 Remuneration of auditors

#### (a) PricewaterhouseCoopers

	2013 \$	2012 \$
Audit and other assurance services		
Audit and review of financial statements Other assurance services	196,500	192,900
Audit of regulatory returns	9,000	8,750
Audit of special purpose financial reports	27,500	22,700
Total remuneration for audit and other assurance services	233,000	224,350
Taxation services		
Taxation services	3,500	29,850
Other services		
Other	-	5,195
Total remuneration of PricewaterhouseCoopers	236,500	259,395

## 26 Reconciliation of net income to net cash inflow from operating activities

	31 December	31 December
	2013	2012
	\$	\$
Net income for the year	22,036,190	15,339,470
Depreciation and amortisation	16,660,533	11,136,313
Dividend income	(124,681)	(197,977)
Interest received	(2,400,369)	(2,910,567)
Net (gain)/loss on sale of available-for-		
sale financial assets	(16,011)	(25,504)
Net amortised interest expense	11,144	48,119
Net (gain) loss on sale of non-current		
assets	1,002	1,923
Decrease (increase) in trade receivables	(1,686,682)	99,220
Decrease (increase) in accrued income	1,895,206	(2,201,262)
Decrease (increase) in prepayments	(1,346,592)	85,584
Increase (decrease) in derivative financial	<i>.</i>	
instruments	(2,040,659)	1,112,599
Increase (decrease) in trade payables	(1,130,808)	833,576
Increase (decrease) in other operating		
liabilities	31,857	(59,086)
Increase (decrease) in provisions	484,715	454,110
Increase (decrease) in income received	17 101 000	5 700 010
in advance	13,101,999	5,709,218
Net cash inflow (outflow) from		
operating activities	45,476,844	29,425,736

## Directors' declaration 31 December 2013

In the Directors' opinion:

- (a) the financial statements and notes set out on pages 7 to 27 are in accordance with the Corporations Act 2001, including:
  - (i) complying with Accounting Standards, the Corporations Regulations 2001 and other mandatory professional reporting requirements, and
  - (ii) giving a true and fair view of the entity's financial position as at 31 December 2013 and of its performance for the year ended on that date, and
- (b) there are reasonable grounds to believe that the Company will be able to pay its debts as and when they become due and payable.

This declaration is made in accordance with a resolution of Directors.

here.

Emeritus Professor GR Sutton AO Director

Mr C Hancock Director

Melbourne 26<sup>th</sup> March 2014

## Independent auditor's report to the members of AARNet Pty Ltd

For the year ended 31 December 2013



#### Report on the financial report

We have audited the accompanying financial report of AARNet Pty Ltd (the company), which comprises the balance sheet as at 31 December 2013, the income statement, statement of comprehensive income, statement of changes in equity and statement of cash flows for the year ended on that date, a summary of significant accounting policies, other explanatory notes and the directors' declaration.

#### Directors' responsibility for the financial report

The directors of the company are responsible for the preparation of the financial report that gives a true and fair view in accordance with Australian Accounting Standards and the *Corporations Act 2001* and for such internal control as the directors determine is necessary to enable the preparation of the financial report that is free from material misstatement, whether due to fraud or error.

#### Auditor's responsibility

Our responsibility is to express an opinion on the financial report based on our audit. We conducted our audit in accordance with Australian Auditing Standards. Those standards require that we comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance whether the financial report is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial report. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial report, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the directors, as well as evaluating the overall presentation of the financial report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### Independence

In conducting our audit, we have complied with the independence requirements of the *Corporations Act 2001*.

#### Auditor's opinion

In our opinion, the financial report of AARNet Pty Ltd is in accordance with the *Corporations Act 2001*, including:

- (a) giving a true and fair view of the company's financial position as at 31 December 2013 and of its performance for the year ended on that date; and
- (b) complying with Australian Accounting Standards including the Australian Accounting Interpretations and the *Corporations Regulations 2001*.

Provoteterse Copes

PricewaterhouseCoopers

Rosalie Wilkie Partner

Sydney 26 March 2014

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