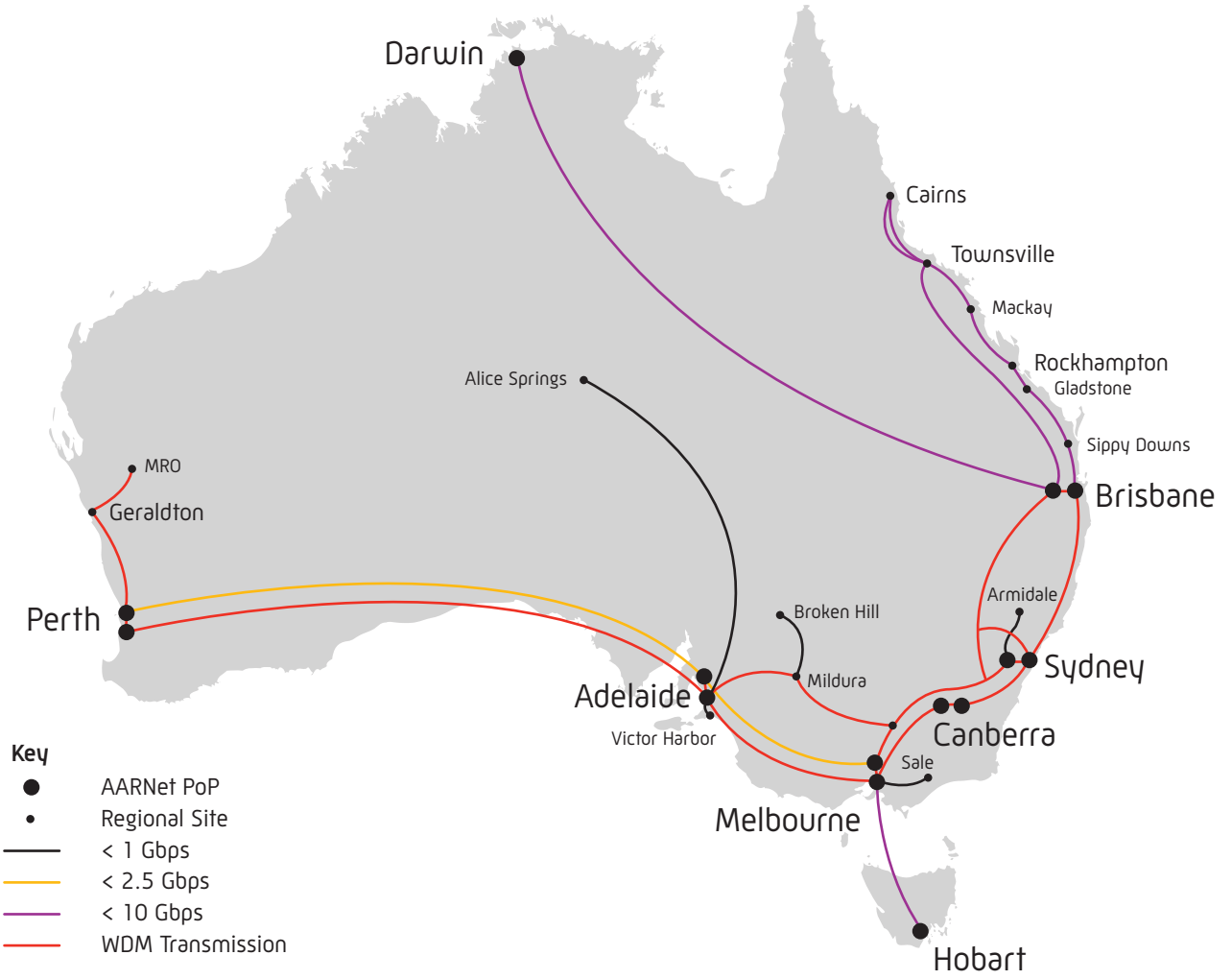

ANNUAL REPORT 2012
aarnet

OUR PLACE IN THE WORLD

ANNUAL REPORT 2012

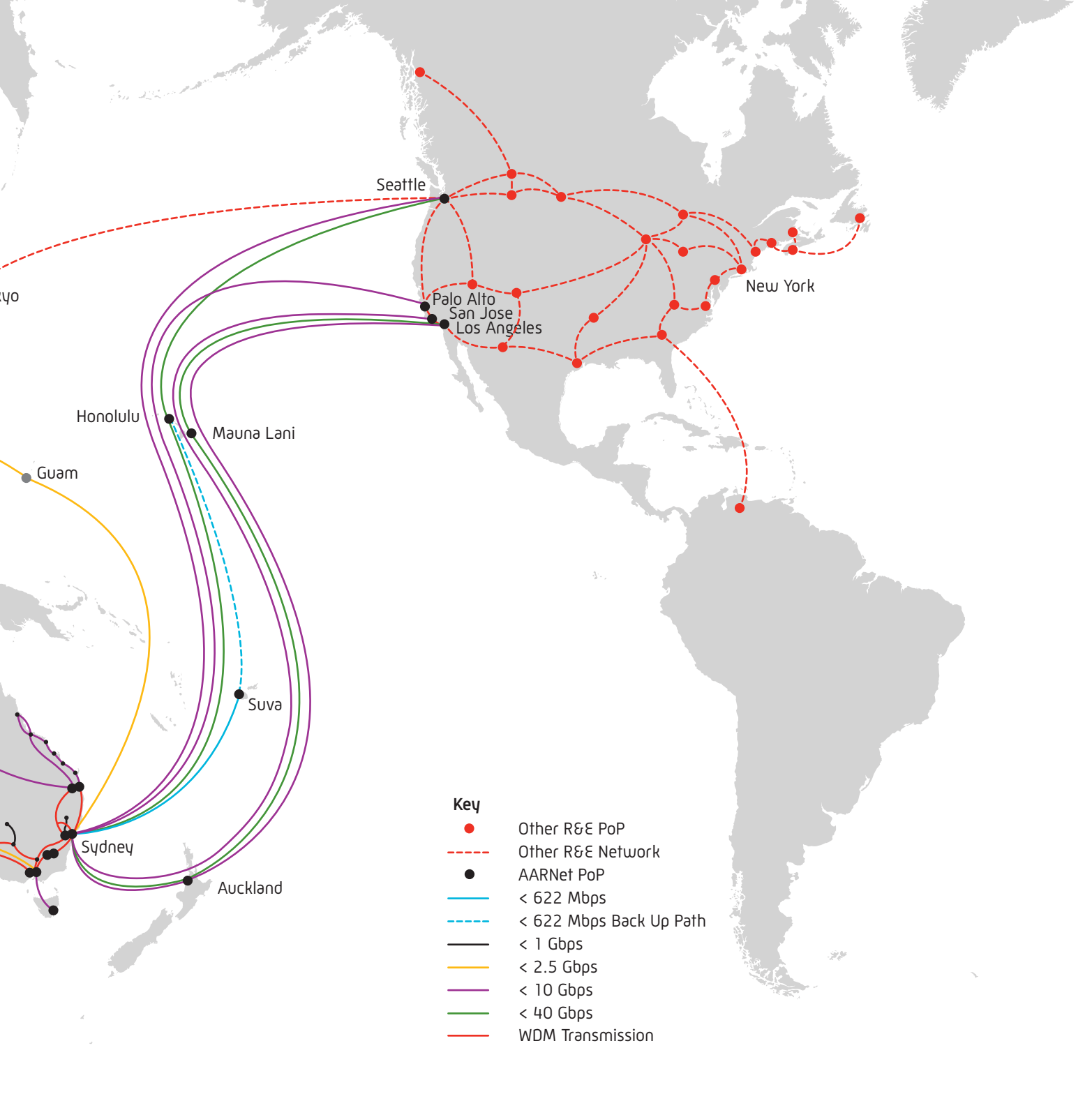
Contents

AARNet National Network



AARNet International Network

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


Seattle
Palo Alto
San Jose
Los Angeles
New York
Honolulu
Mauna Lani
Guam
Suva
Sydney
Auckland
Key
Other R&E PoP
Other R&E Network
AARNet PoP
< 622 Mbps
< 622 Mbps Back Up Path
< 1 Gbps
< 2.5 Gbps
< 10 Gbps
< 40 Gbps
WDM Transmission

The world of research and education is changing, and international network connectivity will be at the very heart of enabling these changes

A message from the chair

Dear Shareholders

I served on the AARNet Board from 2002 to 2004 and in 2012 I have rejoined the Board as Chair. The AARNet of 2012 is dramatically different than the AARNet of 2004. It is a far more complex and professional organisation.

Before I report on our achievements for the year, I would like to address our future which is directed at an overarching purpose: improving the performance of research and education in Australia to sustain our competitiveness in an increasingly global business. This role is vital for Australian research and education to flourish. 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 National Research and Education Networks (NREN)s. Our investment in infrastructure and our development of services must continue for Australia to remain connected to our international partners who together operate the world's most advanced networks.

For almost 25 years AARNet has been reporting on the development of a world-class national research and education network and its excellence in network operations. 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.

We are on the verge of an exciting new era for AARNet. We are uniquely positioned to serve a growing mix of customers. The world of research and education is changing and network connectivity will be at the very heart of enabling these changes. New technologies are resulting in dramatic changes in the way 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 rapidly increasing economies and living standards. Network technology is making it increasingly easier to reach, and serve the broader education communities and I sincerely believe that our people, and core capabilities provides a unique opportunity to play a lead role in this new globally connected era.

The international network will rise in importance, as the need to capitalize on collective research capabilities around the world becomes more pressing. This presents both opportunities and challenges particularly in connecting to Asia. Our recently released White Paper on Australia in the Asian Century says: "As the global centre of gravity shifts to our region, the tyranny of distance is being replaced by the prospects of proximity. Australia is located in the right place at the right time in the Asian region in the Asian century". Underpinning this vision is the need to upgrade our network west to Singapore to deliver the research and education outcomes necessary for Australian economic prosperity.

As Chair of the Board at AARNet I would like to thank my fellow Board Members 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.

We welcomed Dr Ian Tebbet from Monash University to the Board, and I wish to offer my sincere thanks to Mr Paul Campbell from the Australian Catholic University and Mr Kent Adams from James Cook University, who retired from the Board during the year 2012. I have no doubt the future for AARNet is an exciting one.

Gerard Sutton AO
Chair, AARNet Board

Building a 10 year horizon

A message from the CEO

The 2012 year saw the foundations established for AARNet to not only become Australia's leading provider for networks and services to Australian Higher Education and Research; but in addition, positioned AARNet as one of the leading National Research & Education Networks (NREN's) in the world.

The use of the network again demonstrated the strong exponential demand for capacity from researchers, educators and administrators. Traffic grew by 49% from the previous year, with domestic On-Net traffic (traffic between customers) growing at a very healthy 59%, and international On-Net growing at 88%. The traffic profile has changed significantly over the past few years with On-Net now making up 64% of traffic and the 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 84% of all traffic.

Overall, AARNet's network performance and delivery continued to operate at world class standards with overall availability achieving 99.941%. The number of 10Gbps links to campuses grew, and to support the exponential growth of the sector, AARNet also increased its international capacity to the US to 25 gigabits of direct commodity capacity. This enables us to ensure high performance, even during a major international outage. AARNet also extended its dedicated research links on Southern Cross Cable Networks until the year 2025.

On the infrastructure front, AARNet continued to grow its fibre footprint with the Federal Government National Research Network Programme (NRN), allowing AARNet to plan and institute 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 consolidated its partnership with Nextgen by initiating connections for the five (5) NBN Blackspots Links, with implementation on both the Brisbane to Darwin and Perth to Geraldton links.

The core network design was reviewed and redesigned to begin the planning for the implementation of AARNet4, which will be the next generation rollout of a new 100 gigabit per second backbone across the country along with the commencement of consistent 100 gigabit per second links to the US with our key partner Southern Cross Cable Networks.

AARNet continued to develop its capacity to provision services above the network layer including the successful development of CloudStor, a large file transfer service dedicated for the Australian researcher community. The take up of this product by the research community has been nothing short of astounding. In addition, AARNet developed and implemented two new cutting edge service delivery platforms. First was the launch of a telepresence exchange allowing institutions to link their high definition telepresence video systems both nationally and around the world. Second was the implementation of a 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.

Network "demonstrators" continued to exemplify the benefits of high bandwidth availability. In the 2012 year, the Murchison Radio Astronomy Observatory was officially launched as the Australian site of the Square Kilometre Array Project, and our high energy physicists shared in the celebrations in the recently confirmed finding of the elusive Higgs Boson particle. Our TAFE's , schools, and hospitals are broadly adopting video collaborations and interactive tools as the national bandwidth improves, and our cultural institutions are readily adapting to 'Network Augmented Performance,' including the world first "Space –Time concerto competition" hosted by the University of Newcastle.

Our partnership with the National Broadband Network (NBN) continued to grow as one of their registered providers. 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 NBN in the future.

The financial headline indicators 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 Members.

It is important to note the 2012 one-time contributions to our income from the National Research Network Program (NRN) of ($7.5m) and earnings from our investment portfolio ($3.1m). Without these items, our surplus for the year would have been $4.8m.

The National Research Network Program 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 Innovation, Industry, Science, Research and Tertiary Education for their vision, funding and support for the NRN project and Paul Sherlock at the University of South Australia for his outstanding management of this highly successful program.

Finally, I would like to thank our new 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.

It is a much used expression to say that all of these achievements would not be possible without a fantastic team of people, all focused and working toward a single goal – at AARNet this is so true - we are very fortunate to have an outstanding team who have once again shown their extraordinary dedication to what has been a truly significant year in AARNet's history and in the future development of the Internet in Australia.

Chris Hancock
Chief Executive Officer

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

* $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)

World-first Sea-quence project unites Great Barrier Reef and Red Sea Scientists

Leading researchers from Australia and Saudi Arabia are coming together to understand the genetic makeup of corals and how they might respond to climate change

This project is an initiative of the Reef Future Genomics (ReFuGe) consortium, The Consortium brings together leaders in coral reef science and management. This project aims to uncover core genetic data for the Great Barrier Reef and Red Sea Corals, and use this information to protect them from climate change. AARNet members The Great Barrier Reef Foundation, James Cook University, the Australian Institute of Marine Science, the University of Queensland, the Great Barrier Reef Marine Park Authority, and the Australian National University have come together with the King Abdullah University of Science and Technology (Saudi Arabia).

The Institute of Molecular Biology
World-first Sea-quence project unites
Great Barrier Reef and Red Sea scientists

Australia

The AARNet network allows the Sea-quence project to

- Sea-quence data for 10 coral host species across 6 different coral types on the Great Barrier Reef, providing five times the currently available data
- Sea-quence data for 4 algal symbionts (none currently exist);
- Develop a new suite of microbial symbiont sea-quence data;
- Sea-quence a suite of 'sister species' data for the Red Sea. This work will be undertaken by the King Abdullah University of Science and Technology of Saudi Arabia.

Generating data for a wide scale across the Great Barrier Reef and the Red Sea will also provide critical comparative information, enhancing our understanding of how and why some corals are more resilient.

The collaborations surrounding this project, together with its scale, make it a world-first.

Multicoloured soft coral in the Red Sea

Installing a trench for the Sunshine Backbone Fibre in Rockhampton, Queensland

Operating a world class network

Operational highlights

- Extending the life of AARNet3 and planning for AARNet4
- AARNet extends NBN services to wireless and satellite
- International on-net grew by 88%
- 10Gbps international commodity upgrades to Seattle and San Jose
- Domestic peering now accounts for 56% of all traffic
- Tasmanian Government Schools connect to AARNet
- Lighting 2700 kms of fibre from Adelaide to Perth
- 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 99.94% 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.

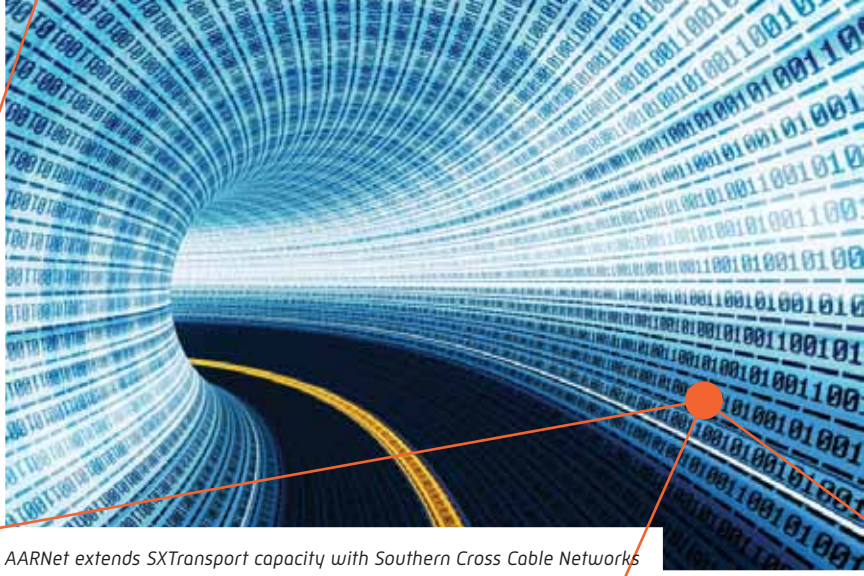
AARNet operates a world class IP network, equivalent to international "Tier One" ISPs, where our customers receive 100% backbone network reliability with no service degradation during outages, planned or otherwise. Whilst there were no significant outages during the year, AARNet still conducted a number of disaster recovery exercises. This year we simulated a double inter-capital 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 grew by 88% meaning Australian research and education is increasing its collaboration internationally, and domestic peering now accounts for 56% of all traffic.

Extending the life of AARNet3 and planning for AARNet4

AARNet3; the third generation of the AARNet domestic network, is now in its 9th year and continues to provide a high performing and highly available network. It uses underlying 10Gbps transmission provided by either our optical network or Nextgen infrastructure between the major capital cities to carry all our domestic and international internet traffic. The life of AARNet3 has been extended by the sheer number of 10Gbps links and improvements in diversity and redundancy. However AARNet3 is reaching capacity at various points on the optical network limiting the number of 10Gbps connections to the backbone with a high cost in router interfaces. This makes it difficult to provide a differentiated service such as a 'platinum' high performing on-net (R&E) and 'bronze' lesser performing and lower cost off-net (commodity).

AARNet4 will upgrade and build 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 will replace 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 will also enable 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.



AARNet extends SXTransport capacity with Southern Cross Cable Networks

International capacity upgrades to the US

International on-net meaning research and education traffic between our customers and their international partners grew by 88% over last year. Not all international research and education partners are connected to their national NRENs, meaning their traffic must transit our commodity links rather than our research links on SXTransPORT. We established 2 new 10Gbps circuits to Seattle and San Jose. Delivering diversity and redundancy remains important with AARNet now having 4 commercial grade PoPs in the USA. This significant increase in commodity circuits will allow AARNet to safely drive all circuits to maximum capacity.

AARNet extends agreement with NBNCo to wireless and satellite

AARNet has been well engaged with NBNCo since its inception and was one of the first 6 Retail Service Providers to use the built infrastructure through the Government's considerable investment in the National Broadband Network (NBN). The first NBN customer was the Cathedral School in Townsville who connected to AARNet on 31 August 2011. This year AARNet completed the on-boarding process for NBN wireless and satellite services. Some 78 independent schools in Western Australia will be the first to benefit from the NBN satellite service.

Our continuing interest in NBN services is last mile connections for staff and students in the NBN release sites and small research and education sites, which do not have close proximity to the AARNet backbone.

Lighting 2,700 kms of fibre from Adelaide to Perth

AARNet is undertaking the lighting of some 2,700 kms of fibre from Adelaide to Perth. This is one of the longest un-regenerated fibre spans in the world and across some of the harshest terrain in Australia with more than half of the distance requiring solar power. AARNet will use advanced technology to deliver 8Tbps of capacity linking Perth to the eastern states as never before. This will particularly benefit radio astronomy Australia wide and linking the home of the SKA at the Murchison Radio Astronomy Observatory.

...continues on page 12

Photos courtesy of Abbotsleigh School

Global learning in the classroom

Real-time video collaboration is proving to be a powerful teaching and learning tool in K-12 classrooms around the world, engaging students by delivering the curriculum in new and exciting ways

Singapore

Australia

During 2012 AARNet's National Video Conferencing Service (NVCS) delivered a broad range of rich educational content to AARNet connected schools and also provided many students in Australia with opportunities to interact with their peers in classroom across the Asia Pacific and beyond, enabling them to explore and further their understanding of global issues.

The Abbotsleigh School, one of the first schools in Australia to connect to AARNet's dedicated research & education network, has been a pioneer in opening up educational opportunities and potential with video-conferencing. The AARNet National Video Conferencing Service has provided the opportunity for teachers and students to participate in a range of collaboration activities to enhance the authenticity of the core curriculum.

Abbotsleigh was one of several live interactive sites in the Asia Pacific. The others were National Dali High School (Taiwan), Ngee Ann Secondary College (Singapore), The Shri Ram School, Tagore International School and GD Goenka School (all from India), and Cleveland District State High School (Australia).

In the realm of the performing arts, Abbotsleigh developed a relationship with the Cleveland Institute of Music, engaging Dr Keith Fitch of the Cleveland Institute to teach music composition and mentor Abbotsleigh's brightest music students. Dr Fitch was thrilled to be able to work with these young composers, half a world away through AARNet's National Video Conferencing Service. He says "the commitment they showed to their music and their own personal musical improvement was perhaps the most inspiring part of the experience..."

Taiwan

AARNet enables this level of expertise and international collaboration to be accessible to participant schools and Abbotsleigh who have enjoyed the AARNet network. Video conferencing has been so successful for Abbotsleigh, it is now embedded within the curriculum strategy of the school as a value service for staff and students with the many new collaboration and learning opportunities presenting from researchers in Antarctica, Holocaust victims in New York to four year olds in our Early Learning Centre exchanging cultures with children in China.

AARNet has long been actively involved in facilitating collaboration events with an international spirit that provides unique learning opportunities for K12 students. AARNet actively pursues a collegiate spirit of community engagement, partnering with specialist vendors and content specialists to bring together progressive educational projects for schools. Other international projects in which AARNet participated included:

- Introduction to the Jazz ensemble live from the Manhattan School of Music and made available to schools in Victoria.
- 'Two countries, One future powered by clean energy' a celebration of World Environment Day hosted at Questacon – The National Science and Technology Centre and bringing together primary school children from Australia and the United States to participate in a panel discussion engaging eight to thirteen year olds to imagine how the planet can be powered in the future using energy sources that are renewable and non-polluting. The panel also included the US Ambassador to Australia, Jeffrey Bleich, Green Cross Australia CEO, Mara Bun, and filmmaker and director of the Future Makers, UWS academic Maryella Hatfield.
- Participation in World Languages Week, bringing programs to schools including; a presentation by German language consultant Andrew Ferguson 'Grimm Kinder und Hausmärchen 400', a celebration of 400 years of Grimm Fairy Tales, a German speaking program aimed at students in Years 5 & 6. From Japan Shoko Ishihara presented a live Japanese language speaking presentation on 'Origami and Japanese Culture' also aimed at students in years 5 & 6.

In March 2012, thousands of students and their teachers participated in a DeforestACTION learning event online via interactive video conference and live streaming.

DeforestACTION is a global movement empowering youth and schools to take action to stop deforestation, and create a permanent habitat for orang-utans and other species that depend on forest ecosystems. For the March event AARNet worked with Polycom and DeforestACTION consortium partners, including the Centre for Global Education and Microsoft Partners in Learning, to manage the technical requirements for the Asia Pacific region.

To accommodate different time zones, three sessions were staged throughout the day. AARNet used a High Definition video conferencing multipoint control unit (MCU) to connect the live interactive sites. A Livestream link brought the event to many more schools around the world for viewing only, as an alternative to participating in the interactive event directly.

AARNet has experienced 51% growth in schools connected to the AARNet network during 2012. AARNet's encourages virtual cultural exchange and AARNet's National Video Conferencing Service to facilitate a more authentic, real-time, and up-to-date education experience across geographical boundaries to enhance the curriculum, and the student learning experience.

Re-creating habitats for Orangutans in Borneo DeforestACTION

India

Before and after de-forestation

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 to Darwin (some 2,500 kms) now provides a quantum upgrade to 10Gbps for our NT customers who now connect to our new commercial PoP in Darwin. The Northern Territory schools now connect at 1Gbps making them some of the best regionally connected schools in Australia.

Building the last mile

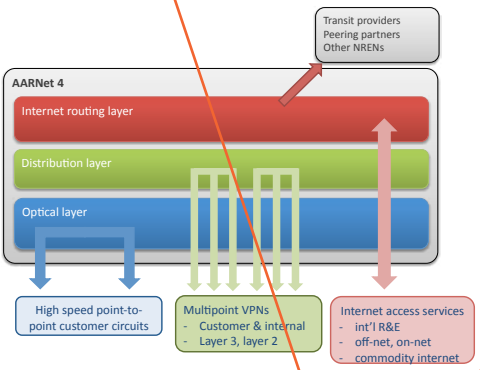
The Education Investment Fund (EIF) allowed AARNet to build dark fibre in nearly every state. While the network design builds in diversity and redundancy across all elements of the backbone, the last mile will continue to be a significant undertaking for AARNet. We built fibre tails into the Sunshine Backbone in Queensland connecting customers from Brisbane to Cairns. We built 3 fibre rings in the Sydney Basin and 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 9 schools in Kew.

As well AARNet has collaborated with councils, 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 Australia wide.

Our Infrastructure Development Team is a dedicated group of optical specialists who enable the significant growth in our optical backbone and will be instrumental in the ASKAP Project.

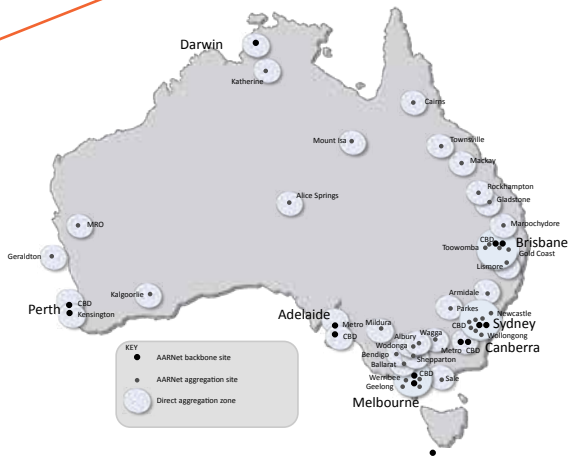
...and many more 10Gbps customer connections

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.



A three-layered approach to AARNet4

AARNet marker post in outback Western Australia



AARNet4 increasing the number of PoPs across Australia

Historic meeting of NREN CEO's plan for the next generation of applications and services

- The first global NREN CEO Forum
- The AARNet UCX and global on-net communications
- NOC extended as a service to customers
- eduroam turns 10
- CloudStor a model development in collaboration
- The National Video Conferencing Service continues its impressive growth

The Global NREN CEO Forum

AARNet was among the thirteen nations represented at an historic meeting of leaders of National Research and Education Network (NREN) organisations from around the world held in Geneva in September. The focus was to plan the future of global research and education technology. For two days, AARNet's CEO Chris Hancock, and the CEO's of CANARIE (Canada), CERNET (China), CUDI (Mexico), DFN (Germany), Internet2 (USA), Janet (UK), NORDUnet (European Nordics), REANNZ (New Zealand), RedCLARA (Latin America), RENATER (France), RNP (Brazil), and SURFnet (The Netherlands) discussed the common strategic challenges they face in delivering advanced ICT services to the research and education communities they serve. With research already a global endeavour and education becoming increasingly more so, the CEOs recognised an urgent need to prepare a seamless global service delivery for users in the research and education community.

Global NREN CEO Forum, held in Geneva in September 2012

AARNet's Unified Communications Exchange (UCX) becomes NREN global initiative

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

The AARNet UCX is a vendor neutral, standards based, voice and video over IP exchange service similar to the VoIP service developed by AARNet in the late 1990's and early 2000's. The difference being that the original system focussed on telephony whereas the new system supports the full range of Unified Communications from the high-end telepresence systems, through to room based videoconferencing, video phones, desktop videoconferencing to mobile applications on Android and IOS. Users of the UCX will probably only notice subtle changes when their first few calls are routed "on-net" across the AARNet network, with small features such as name-based caller ID and high-definition audio that usually only operate within the same beginning to work with other organisations across the sector. The bigger difference will be noticed by users of more feature-rich unified communications such as video-phones and PC application sharing. As more institutions come on to the AARNet and Global Unified Communications Exchanges, these services will work seamlessly between participating organisations.

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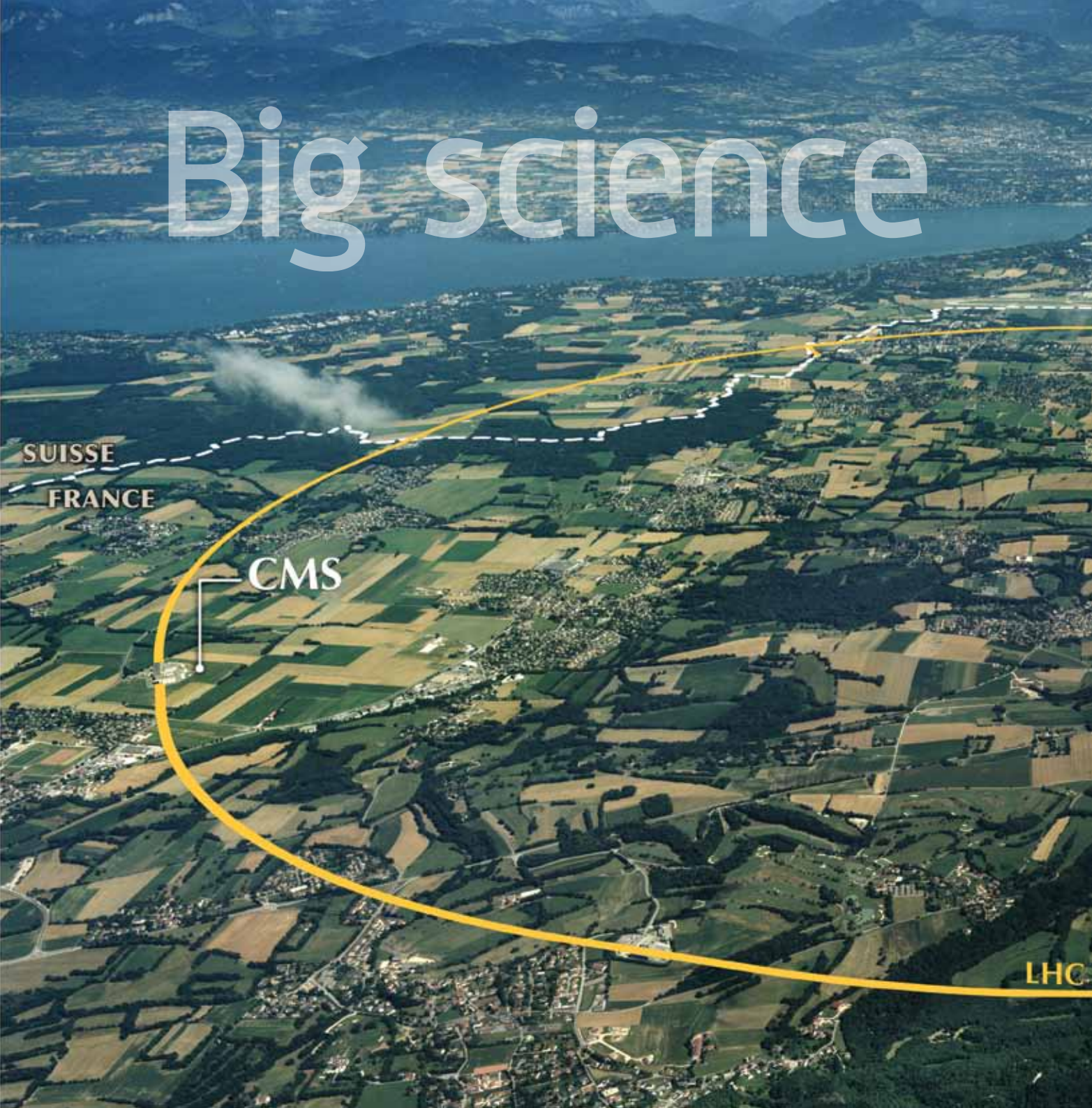
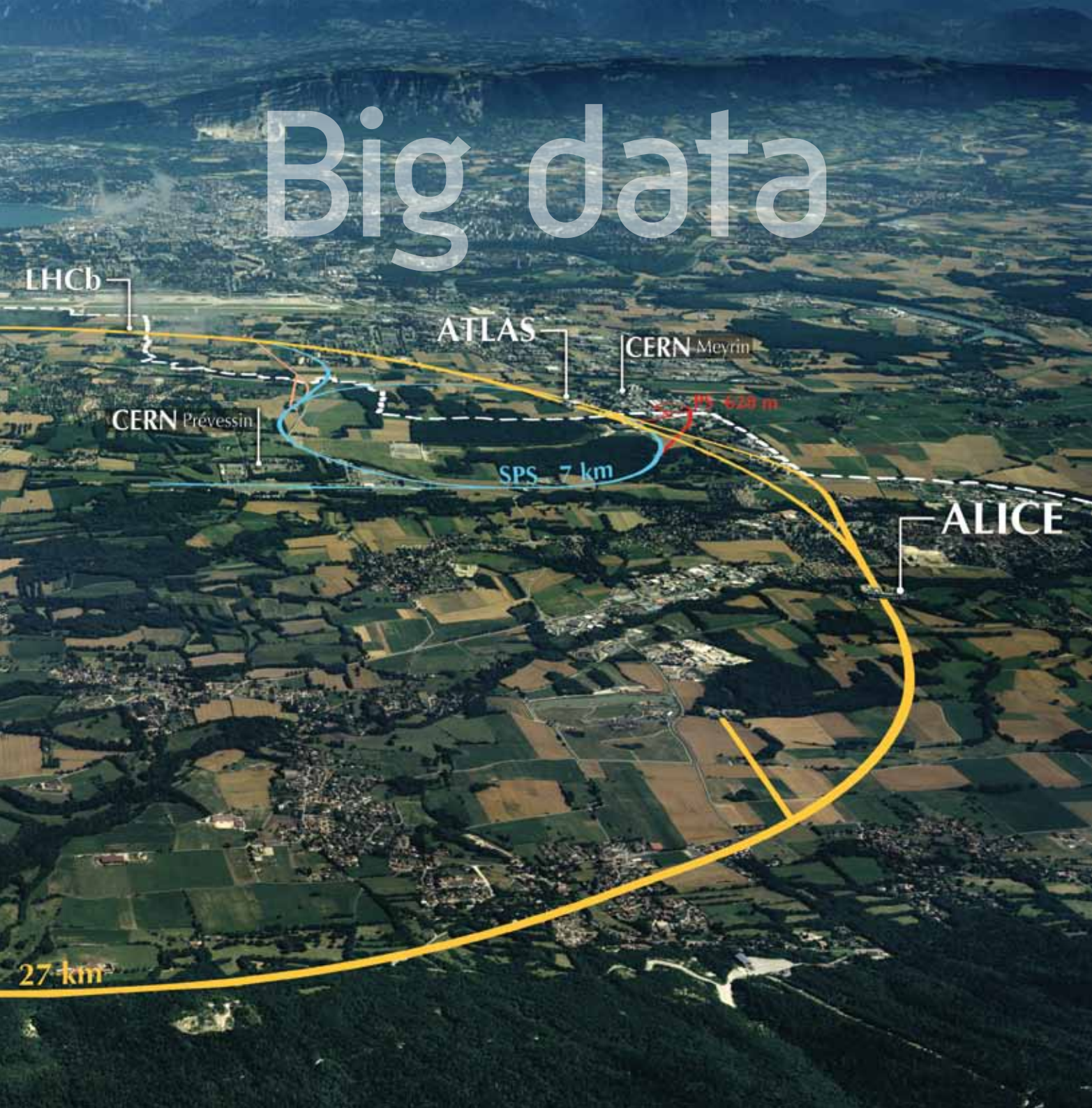
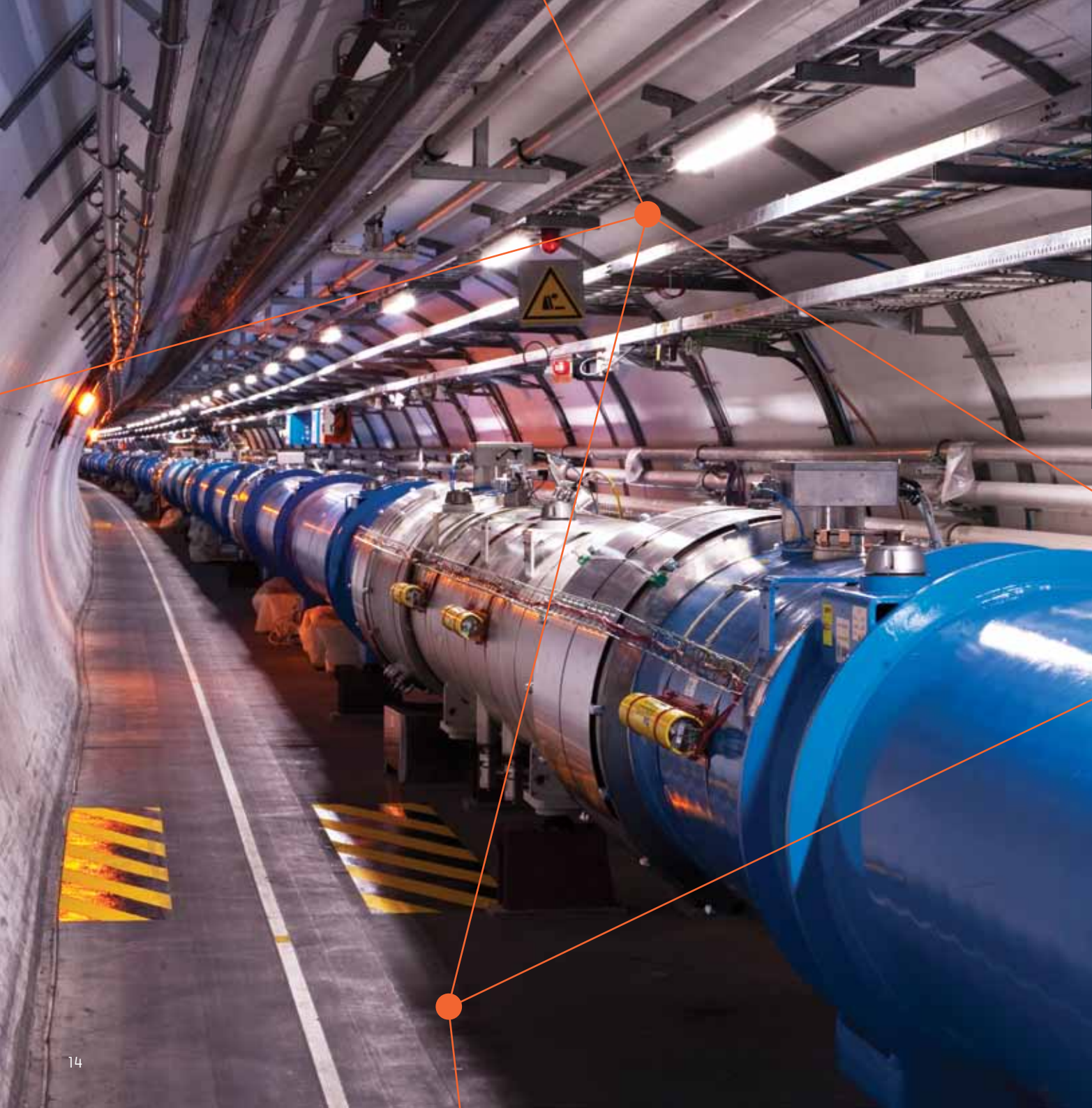
Big science




Big data
LHCb
ATLAS
CERN Meyrin
CERN Prévessin
PS 628 m
SPS 7 km
ALICE
27 km



The LHC consists of a 27-kilometre ring of superconducting magnets with a number of accelerating structures to boost the energy of the particles along the way

View of the LHC tunnel sector 3-4, credit: 2009 CERN

Professor Geoffrey Taylor
School of Physics
The University of Melbourne
photo courtesy of
www.coepp.org.au

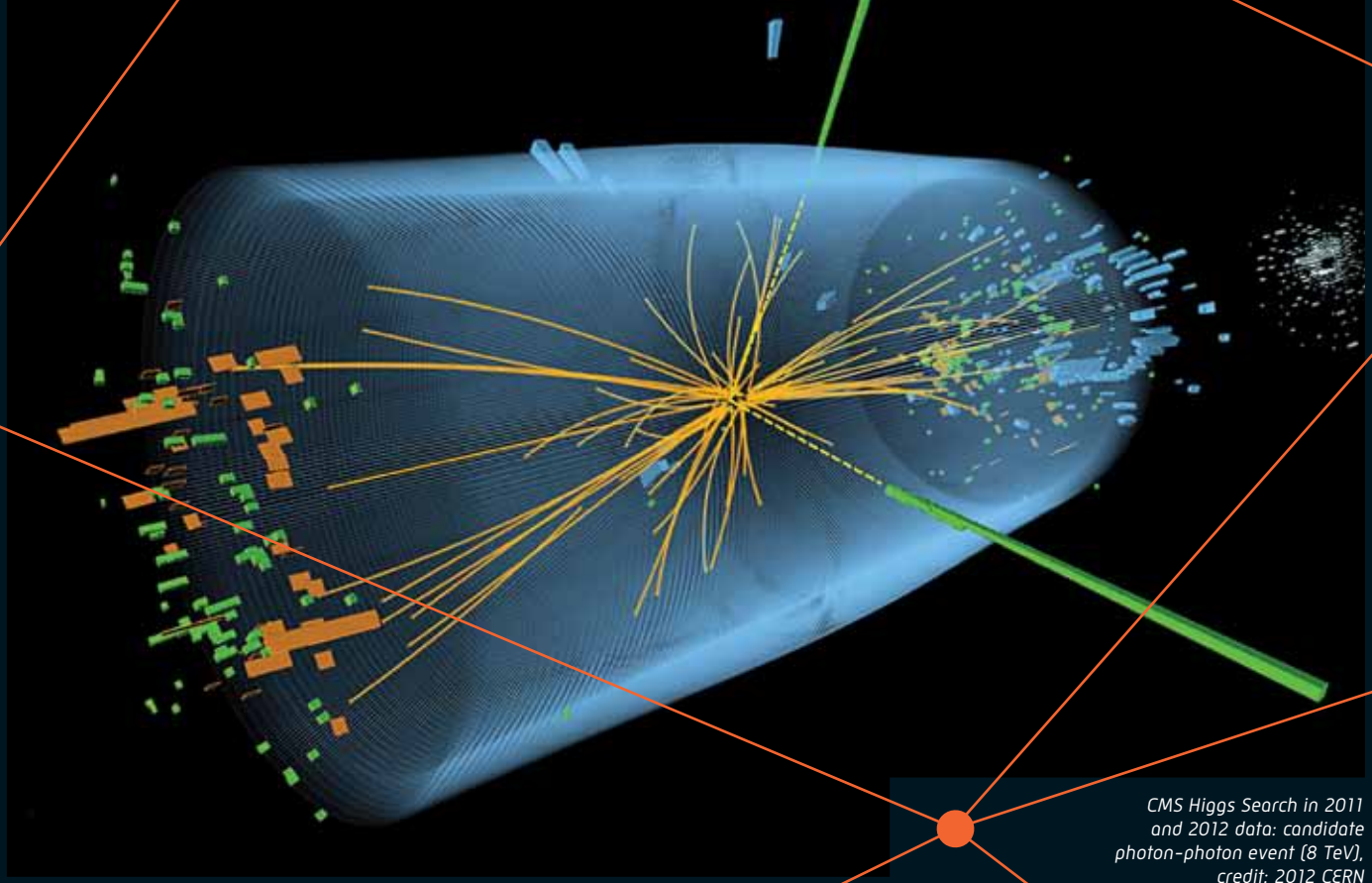
A new world, where the Higgs boson exists

The Large Hadron Collider (LHC) the world's largest and most powerful particle accelerator, first started up on 10 September 2008, and remains the latest addition to CERN's accelerator complex

On 4 July scientists at a Large Hadron Collider at CERN in Meyrin Switzerland announced that experiments had revealed the discovery of a new fundamental particle, with many Higgs-like characteristics.

At the Moriond Conference in March 2013 the ATLAS and CMS collaborations at the Large Hadron Collider presented preliminary new results that further elucidate the particle discovered last year. Having analysed two and a half times more data than was available for the discovery announcement in July 2012, they found that the new particle is looking more and more like a Higgs boson, the particle linked to the mechanism that gives mass to elementary particles. It remains an open question, however, whether this is the Higgs boson of the Standard Model of particle physics, or possibly the lightest of several bosons predicted in some theories that go beyond the Standard Model. Finding the answer to this question will take time.

Australia



CMS Higgs Search in 2011 and 2012 data: candidate photon-photon event (8 TeV), credit: 2012 CERN

Australia's involvement in the particle-smashing work at the LHC is co-ordinated by the ARC Centre of Excellence for Particle Physics at the Terascale (CoEPP) where Professor Geoffrey Taylor is Director. "This is a very exciting time for physicists," said Professor Taylor. "Physicists are not normally very effusive but we are at this time. This is a milestone for the physics community, and for human understanding of the fundamental laws that govern the universe. As scientific discoveries go, this is up there with finding a way to split the atom," Professor Taylor said. "People have been working towards this for many years, and Australian groups have been part of this from the beginning so for the best part of 25 years. And to now be part of the reportage is a real privilege." At times the data has been streaming continuously for long periods across AARNet's trans-Pacific links at more than 600Mbps. It has also peaked at over 1Gbps. Traffic in the opposite direction, from Melbourne to CA-TRIUMF, has also been significant, peaking recently at near 1Gbps, and averaging at times over 100Mbps.

The ARC Centre of Excellence for Particle Physics at the Tera-Scale is based out of The University of Melbourne with collaborating and partner organisations including:

- The University of Adelaide
- The University of Sydney
- Monash University
- University of Pennsylvania
- Cambridge University
- l'Universite de Geneve
- Albert Ludwigs Universitaet Freiburg
- INFN Sezione di Milano
- Duke University

The Centre will for the first time in history coordinate terascale high energy physics research across Australia, creating new research groups at the Universities of Adelaide and Sydney and augmenting groups at Melbourne and Monash. It will greatly enhance international linkages. Through it, the Australian Government will liaise with key scientific organisations active in high energy physics, advanced computing and accelerator science. The advanced Grid computing program will develop important relationships with national and state computing facilities, and major corporations. Building upon the huge media interest in the Large Hadron Collider, the Centre will highlight the benefits of big science.

The discovery of a Higgs boson-like particle will see the international research effort shift focus to study its unique characteristics – and Australia's Synchrotron is also playing a collaborative role with CERN.

Australia's highest energy particle accelerator, which broke the world record for generating the 'smallest, brightest, most intense electron beam', is a test bed for the new technologies and techniques needed for the next phase of Higgs boson-related study. One of CERN's technology experts, Dr Ralph Steinhagen, has been working with researchers at the Synchrotron in Clayton on studies aimed at increasing the precision of measurements and control of particle beams. The work will inform the 2013/2014 enhancement of the Large Hadron Collider (LHC).

As Australia's academic and research network, AARNet facilitates high capacity telecommunications connectivity across Australian universities and the international NREN communities to make international collaborations conducted by the Australian Synchrotron and the ARC Centre of Excellence for Particle Physics possible.

Switzerland

Read more: http://www.theage.com.au/technology/sci-tech/australia-has-role-in-god-particle-research-20120711-21we5.html#ixzz2Ny7rLFTh

This article is possible thanks to CERN and the Australian Research Council

http://home.web.cern.ch/about/updates/2013/03/new-results-indicate-new-particle-higgs-boson

http://www.arc.gov.au/ncgp/ce/particle_physics.htm

http://www.synchrotron.org.au/index.php/news/news/media-releases/787-the-australian-synchrotron-helps-its-big-brother-in-geneva

Photos thanks to:

http://home.web.cern.ch/about/updates/2012/12/highlights-cern-2012

View of InGrid Project at night, credit: 2011 CERN

Telepresence room at Swinburne University, call to the Astro physics lab at Parkes and to another room at Swinburne

The AARNet UCX accepts outbound calls from connected organisations through a SIP trunk and looks up a number of addressing databases to see if the call can be directly connected by the UCX before being re-routed over the PSTN if there is no on-net route found. The AARNet UCX combined with an AARNet managed regional server for nrenum.net can accept and forward inbound voice and video calls for connected organisations from the global NREN community and the wider Internet.

Early adopters' such as AIMS, CSIRO, ANU, Monash, and Deakin have been using the UCX for several months with very good results, most other institutions have only been routing selected test calls whilst trialling the service and working out local call routing and legacy PABX telephone system issues.

AARNet has direct SIP peering links to NLR and Internet2 in the USA for full immersive Telepresence systems and uses nrenum.net and E.164.arpa 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 approximately 30 countries around the world in Europe, Asia and the Americas.

NOC extended as a service to Customers

Operating a Network Operations Centre (NOC) has long been a core competency of AARNet, operating its own fully staffed 24/7 operation in both Sydney and Perth.

Responding to interest from customers, AARNet has extended its own NOC service to monitor the customer's network. The Australian Catholic University (ACU) became AARNet's first customer with AARNet monitoring a range of hosts and services, including routers, switches, VMware hosts and DHCP servers including the provision of a range of monthly KPI reports. NOC Services can provide improved fault isolation, overall ICT availability and cost savings through greater network visibility and information.

As AARNet develops its NOC Services further, KPI reporting and trend analysis will lead to better capacity planning and fewer incidents for each customer.

eduroam turns 10

eduroam, the ground-breaking secure roaming connectivity service has now spread to over 50 countries globally, with more than 5,000 locations in Europe alone where researchers, students and teachers with eduroam credentials can securely access the Internet while away from their home institution.

A celebration of eduroam's ten-year anniversary took place during the 2012 TERENA Networking Conference (TNC2012), honouring Klaas Wierenga who had the original idea for eduroam while employed at SURFnet, the Dutch National Research and Education Network (NREN) organisation.

This year AARNet significantly improved support for eduroam with increased monitoring, alarms and reporting. Neil Witheridge, AARNet's manager responsible for the eduroam AU service, used APAN33 in Thailand to promote eduroam uptake in Asia offering eduroam service deployment assistance to APAN member countries. Malaysia and India are two APAN member countries currently working towards the deployment of eduroam with the assistance of AARNet.

CloudStor a model development in collaboration

CloudStor has been a model development in collaboration with the Norwegian and Irish research networks. Development continued with an ever expanding consortium; 12 different national research networks at last count with more than 5,000 researchers in Australia using the service.

CloudStor is fully web based, which makes it immune to the quirks of email size limitations and firewall problems. CloudStor is hosted by AARNet, so foreign data and privacy laws do not apply and works by allowing users to securely upload files to a central storage node on the AARNet network.

From that central point, a unique URL is automatically distributed by email to a list of recipients to allow them to download their file. So far, testing has confirmed the ability to upload files of up to 100 GB, but there is virtually no limit.

AARNet has recently announce CloudStor+, which will provide an online storage service for researchers with data replicated across AARNet nodes based in Brisbane, Melbourne and Perth. This will enable researchers to not only store and share data with others in a secure manner, but will also enable them to replicate data between connected devices at high-speed.

Questacon 2012 – The National Science and Technology Centre

The National Video Conferencing Service continues its impressive growth

AARNet launched its new conferencing scheduling platform midyear. The new service added greater functionality and support to schedule conferences, streaming and recordings on its central videoconference infrastructure, offering greater flexibility, capacity and redundancy options for customers. Through the work done in creating the AARNet Unified Communications Exchange, the videoconference infrastructure is now capable of hosting virtual meetings including a wide variety of end-user platforms including traditional telephone, smart phones, iPad, Android, PC, Mac, videoconference and telepresence.

Eduroam , accessible on your mobile device

CloudStor – a model development in International Collaboration

CloudStor, the web-based service which enables files to be sent securely and efficiently, was pioneered by AARNet, and would not have been possible without the collaboration of other NRENS, the end result being a common platform available to NREN members globally

"The ability to share information between the Australian and international scientific and research communities, is critical for seamless collaboration to take place. CloudStor demonstrates the importance of a high speed network to improve the productivity of our users by enabling large file transfers to take place over AARNet's network." AARNet CEO Chris Hancock

The nature of being able to transfer files with virtually no limit on file size brought the opportunity for secure faster communications and file sharing, removing logistical impositions on collaborative international research.

CloudStor was borne from a concept of a 'large attachment box' for practitioners. It was during this development stage, that UNINETT and HEANet, the Norwegian and Irish NRENS, who were independently trialling similar projects, came on board, and this global collaborative project which would eventually result in CloudStor was borne.

By the end of 2010, four other collaborators had joined; BELNET (Belgium), SURFnet (Netherlands), SRCE Filesender Service from Croatia and the TERENA Filesender installation project based in Amsterdam. In 2011 five more NRENS joined, from Portugal, Luxembourg, Slovenia, Catalonia and South Africa. In 2012 a further 13 NREN's followed, from Hungary, Lithuania, Czech Republic, Denmark, Israel, Italy, Finland, and Internet2, our American counterpart, bringing a total of twenty-six collaborators on the CloudStor service. Today, ten of those 26 sites contribute funding; nine have contributed code or man-hours; and almost all have turned in translations into their local language. CloudStor has a mechanism built in that determines what language your browser is set to and presents the user interface in that language (if available).

Ireland

Norway

Current available translations include German, French, Italian, Norwegian, Danish, Czech, Slovenian, Croatian, Serbian, Spanish, Finnish, and Hungarian.

What started out as a glimmer of an idea is now a de-facto standard for file transfers across academic networks.

Development is never finite, and we are now exploring CloudStor+; a new service being made available to AARNet customers, for larger files building on the success of CloudStor, enabling them to easily and securely store files "in the Cloud". CloudStor+ is currently in Beta release, being tested with a small group of users, and AARNet's is looking to release a near-fully featured version of CloudStor+, where up to 100GB of storage will be available to individual researchers free of charge, for general use by late April, 2013.

Australia

Australia

Our Team

Project Manager Blake Murray at work on the ASKAP Installation in Western Australia

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 many other related organisations. Shares in AARNet Pty Ltd [AARNet] are held by the thirty-eight Australian Universities and the CSIRO as listed in Appendix A of this Annual Report. AARNet is a licensed Australian telecommunications carrier [#61 under the Telecommunications Act 1997 Cth]. The AARNet financial Annual Report for the year ended 31 December 2012 is enclosed.

The Chief Executive Officer reports to the Board of Directors listed in Appendix A. The AARNet Advisory Committee [AAC] represents the interests of the Members and is a source of advice on policy and business matters. Regional Network Organisations, which are generally state based, elect one representative to the AAC.

The AARNet Board of Directors

The Board of Directors, see Appendix A, 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 Executive Management Team, with careful planning is continually striving to add depth to the AARNet experience.

This strategic plan has enabled our national research and education network to develop and maintain one of the largest operational footprints in the world.

During 2012, the total number of AARNet employees grew to 66. 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. 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 commercial expertise to continue to deliver to our customer freedom of connectivity not previously seen in Australia.

This growth welcomed new employees Adam Kermond, Angus Griffin, Ricky Jap, Jane Gifford, Ben Maclean, Hema Dasarathan, Hari Venkatarama, Hilary Goodson, and John Batchelder. We also said farewell to Evan Bellos and Rob Ewin.

Nick Cross and Brett Rosolen of AARNet at a customer demonstration

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 and 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.

During the year we had AARNet staff participate in national events such as QUESTnet 2012, Questacon 2012 and international conferences such as Switzerland's Institute for Management Developments' seminar on orchestrating winning performance. A number of international conferences and meetings were also well attended, with AARNet representatives at such research and education forums as APAN and TERENA.

24x7 NOC – Since its introduction in 2010, AARNet continues to provide steady proactive Network Operations and monitoring services through its 24x7 NOC team and services. The AARNet Infrastructure team is an established and skilled group providing expertise and connectivity to our customers as nationally. AARNet finance and business development teams continue to support the growing organization.

Important Publications and Policies

- Previous Annual Reports: www.aarnet.edu.au/about-us/publications
- AARNet Book - 20 years of the Internet: www.aarnet.edu.au/about-us/publications
- AARNet Access Policy: www.aarnet.edu.au/about-us/policies
- AARNet International and Domestic Peering Policy: www.aarnet.edu.au/about-us/policies
- AARNet Content Policy: www.aarnet.edu.au/about-us/policies
- AARNet Privacy Policy: www.aarnet.edu.au/about-us/policies

AARNet staff as at December 2012

Australian Capital Territory – 5

New South Wales – 35

Queensland – 7

South Australia – 1

Victoria – 9

Western Australia – 9

Total = 66

Don Mackintosh of AARNet receiving "iAward" on behalf of AARNet

The Fiji School of Medicine was connected for the first time in 2012

The Advanced Telemedicine project connecting medical researcher across the Asia Pacific

2012 commemorated the 10th anniversary of the partnership between Advanced Telemedicine and AARNet in the Asia-Pacific region

Korea

The Advanced Telemedicine project began in 2002; enabled by high-speed internet connections between Japan and Korea facilitated by their joint hosting of the world cup. More specifically, the city of Fukuoka suddenly had access to these superfast connections, and a dedicated group of medical and engineering professionals who decided to utilize these, and formed a team to explore the use of telecommunications and information technologies to provide clinical health care at a distance.

Our team established a new system that enabled the clear and smooth transmission of medical content using affordable and commonly available equipment. The potential to revolutionize accessibility of world class health education and training was seen, and the system rapidly expanded into the Asia-Pacific region and beyond.

Fiji

Live surgery from Tokyo to New York, the 6th Asia Telemedicine Symposium in Fukuoka Japan

The 6th Asia Telemedicine Symposium was held in Fukuoka Japan

The Medical Working Group was formally organized at the Asia-Pacific Advanced Network (APAN) meeting in 2005, and the Asia Telemedicine Development Center of Asia (TEMDEC) was created at Kyushu University Hospital, Japan, in 2010, both of which made our overall management more reliable and effective. The 6th Telemedicine Symposium was held in Fukuoka to commemorate this occasion; it was a pleasure to meet old friends and collaborating members.

Telemedicine continues to have wonderful support and growth; new connecting sites that have joined this year include the Fiji School of Medicine (FSM) at the University of South Pacific in Oceania. Earlier last year we hosted a doctor from the FSM for a month-long training program, and we hope collaboration with their endoscopic centre will strengthen the relationship, and prove mutually beneficial.

In 2012, we hosted 53 programs in various fields such as surgery, endoscopy, and cardiology; and also hosted learning programs for nursing and medical students. Over the last ten years, we have connected 213 institutions, across 34 countries in the greater Asia-Pacific region.

In terms of technology, we continue to innovate, our most recent recognition being the development of the Vidyo system. This has been recognized as being another powerful and convenient system to which mobile devices can be easily connected with high-definition image quality.

The last decade has seen us grow from a revolutionary idea to an effective, well-supported organisation, reaching across various regions, and countries.

What will happen during the next decade? I sincerely hope that our work will produce even better results and educational programs over research and education networks, such as AARNet in Australia, in accordance with the continuous development of new technologies, which will see better global medical collaboration in another 10 years.

Shuji Shimizu, MD, PhD
Director
Telemedicine Development Center of Asia (TEMDEC)
Kyushu University Hospital

University of Newcastle – Space Time Concerto

AARNet's participation in the international community

- Australia vs Korea Dance Battle
- Space Time Concerto - Around the World in 80 milliseconds
- AARNet delivers Amazon Web Services (AWS) from the US
- eResearch Australasia had a record attendance
- Asia Pacific Advanced Network Conference (APAN) in Thailand and Sri Lanka
- Megaconference – a 24 hour world-wide event
- QUESTnet 2012 Conference hosts attendees from Fiji and New Zealand
- ...and conducted a NAGIOS monitoring workshop

Australia vs Korea Dance Battle

Linking a live international dance battle in real time between Melbourne's Federation Square Big Screen; Perth's Northbridge Piazza Screen; and the big screen at the Nabi Art Centre in Seoul, Korea was the challenge given to AARNet on 14 October 2012. Finalists battled it out with competitions distributed across the venues taking in B-boy, Krumping and Popping dance styles with hip hop workshops also being conducted throughout the day across the network to the various venues by some of the best emerging dance crews Melbourne, Perth and Seoul have to offer. The dance battle is part of an AARNet and Australian Research Council sponsored five year project between Federation Square, the University of Melbourne, the University of Western Australia and the University of Sydney to gain an understanding of how technology can create community across disparate space and cultures. Audience research data collected during the event will be used to evaluate the levels of engagement and connectivity experienced by spectators, dancers and participants. Researchers expect it will provide fresh insight into user experience and screen connectivity in culturally and geographically distinct urban public environments.

Space Time Concerto – Around the World in 80 milliseconds

The University of Newcastle connected with the AARNet National Video Conferencing Service to present its International Space Time Concerto competition (otherwise known as 'Around the world in 80 milliseconds') to celebrate the historical form of the concerto together with contemporary interpretations that showcased the latest in digital collaboration technology.

In the final concerts held in November and December, eleven finalists played with specially selected musicians in two orchestras formed for the event, as well as an internet-linked ensemble spanning five countries. The musical sites connected via high definition video codecs with real time audio fidelity running over the AARNet network linking to other research and education networks worldwide.

University of Newcastle – Space Time Concerto

AARNet delivers Amazon Web Services (AWS) to Universities

Cloud Computing promises to improve organisational efficiency and flexibility enabling organisations to respond quickly to changing demands. The network becomes key to accessing the full potential and advantage cloud services offer. AARNet has worked closely with global cloud service providers, and as such can offer cloud services that are among the worlds best to its APL customers.

In the case of Amazon Web Services (AWS), for example, AARNet connects directly to AWS's in Oregon bringing these cloud computing services back to Australian research institutions via its Southern Cross links. Connectivity to AWS's US presence is at a full 10 gigabits per second, ensuring high performance uncongested access to the services. According to Marc Bailey CIO at Macquarie University, "AARNet peering with Amazon Web Services lights a path to leverage the most scalable compute and storage platform on the planet by disrupting the bandwidth barrier". AARNet also peers with AWS's in Sydney giving universities access to a selection of services with minimal latency. While some AWS cloud services available in Sydney and Oregon region are considered on-net, some AWS services, including those offered in other AWS zones and Amazon's retail services remain off-net.

eResearch Australasia had a record attendance

The annual eResearch Australasia Conference took place at the end of October in Sydney, with record numbers, mostly from Australia and New Zealand, but with a few delegates from the USA, the UK and South Africa. Once again, it provided a great opportunity to network with all those involved in devising, building and running Australia's eResearch infrastructure, and also to gain an appreciation of what is being achieved through the large number of projects and activities these people have been undertaking. This Conference was especially pertinent, as it came at a significant watershed in government investment in eResearch infrastructure, which is now coming to an end. The bodies responsible for guiding that investment over the past 10 years or so, the National Research Infrastructure Council (NRIC) and the Australian eResearch Infrastructure Council (AeRIC), will now also wind up, with the overview of future government involvement now being undertaken by the Australian Research Committee (ARCom). Of course, the 2011 Strategic Roadmap for Australian Research Infrastructure (http://www.innovation.gov.au/Science/ResearchInfrastructure/Pages/default.aspx) remains the blueprint for any future development.

Much has been achieved over the past 10 years, some of which will not bear fruit until the various projects like ANDS, NeCTAR and RDSI complete their work during 2013. Sustainability of such projects is important and while AARNet and the Australian Access Federation (AAF) have eminently sustainable funding models, based on subscriptions, this is not true of some e-research infrastructure.

Asia Pacific Advanced Network Conference (APAN) in Thailand and Sri Lanka

APAN33 held in Thailand was an opportunity for Neil Witheridge, AARNet's manager responsible for the eduroam AU service, to promote eduroam and offer deployment assistance in Asia. Malaysia and India are two APAN member countries currently working towards participation in eduroam with Malaysia planning to participate in all three higher education federations – the Grid, eduroam and SAML-based (GeS) federation. Hideaki Sone, from Tohoku University reported on work on the integration of

The Square Kilometre Array Project

Beginning 20 years ago as a lofty ambition of radio astronomers worldwide, the Square Kilometre Array (SKA) took a leap forward to becoming a reality in 2012

South Africa

In May, the International SKA Organisation announced the SKA would be jointly hosted by Australia and South Africa. Both countries offer "exceptionally radio quite environments for detecting very faint radio waves from the early universe", and when complete, the SKA will be a network of thousands of radio telescope antennas that offer a total signal-collecting area of one square kilometre – one million square metres. To achieve this, the SKA will use 3,000 dish antennas, each about 15 m in diameter as well as two other types of radio wave receptor, known as aperture array antennas. The antennas will be arranged in five spiral arms and the dishes will extend to distances of at least 3,000 km from the centre of the long baseline array.

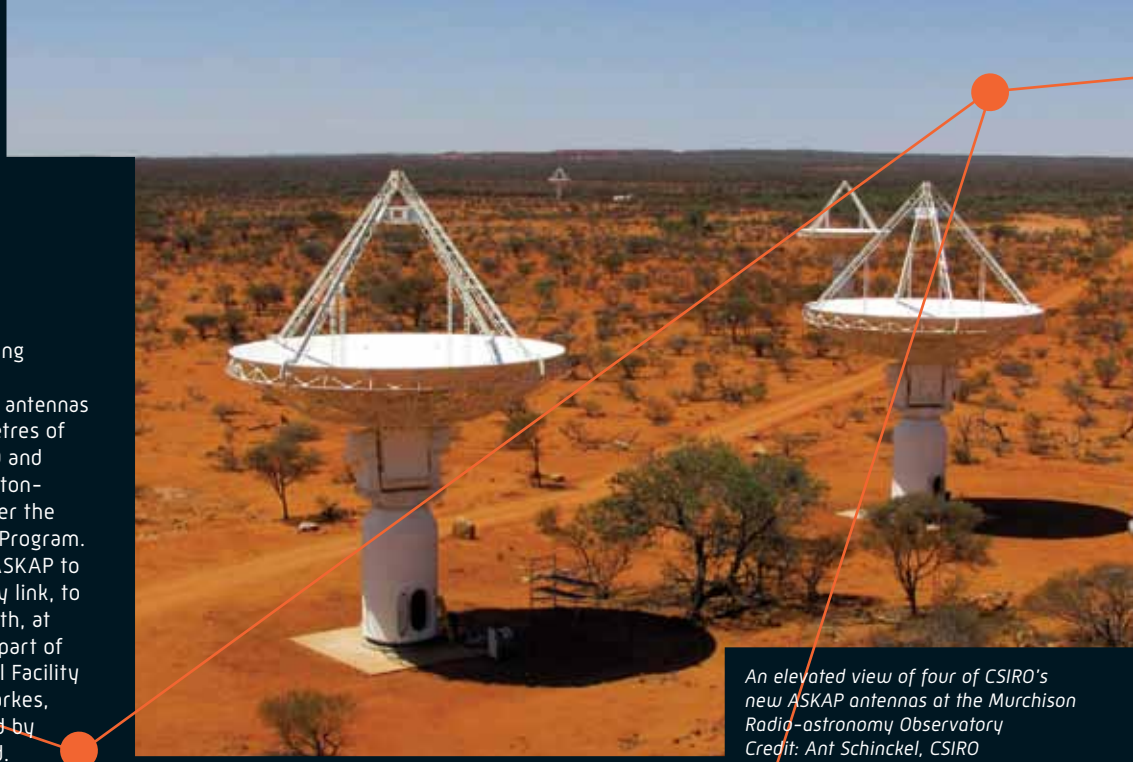
The Square Kilometre Array project is a global science and engineering project to build the world's largest radio telescope, led by the SKA Organisation, a not-for-profit company headquartered in Jodrell Bank Observatory, near Manchester, UK. Members of the SKA Organisation include:

- Australia: Department of Innovation, Industry, Science and Research
- Canada: National Research Council
- China: National Astronomical Observatories, Chinese Academy of Sciences
- Germany: Federal Ministry of Education and Research
- Italy: National Institute for Astrophysics
- Netherlands: Netherlands Organisation for Scientific Research
- New Zealand: Ministry of Economic Development
- Republic of South Africa: National Research Foundation
- Sweden: Onsala Space Observatory
- United Kingdom: Science and Technology Facilities Council
- Associate member: India: National Centre for Radio Astrophysics

The precursor to this vast project in Australia is ASKAP, the Australian Square Kilometre Array Pathfinder project, which on 5 October 2012 was opened at the Murchison Radio-Astronomy Observatory (MRO) in Western Australia. The CSIRO-run Murchison Radio-astronomy Observatory in mid-west of Western Australia will be home to ASKAP.

Workers at the Murchison Radio-astronomy Observatory (MRO) in Western Australia, photo thanks to WA Department of Commerce

Professor Steven Tingay
Professor of Radio Astronomy
Director, Science and Operations,
Curtin Institute of Radio Astronomy
ICRAR Deputy Director
photo courtesy of the website for International Centre for Radio Astronomy Research



An elevated view of four of CSIRO's new ASKAP antennas at the Murchison Radio-astronomy Observatory
Credit: Ant Schinckel, CSIRO

CSIRO and AARNet have been working together since 2011 to build optical infrastructure to connect the ASKAP antennas to the AARNet network with kilometres of optical fibres laid between the MRO and Geraldton, connecting to the Geraldton-Perth link recently constructed under the NBN Regional Backbone Blackspots Program. The new optical fibre links enable ASKAP to connect directly, via a high-capacity link, to the supercomputing facilities in Perth, at Curtin University. ASKAP will form part of CSIRO's Australia Telescope National Facility along with existing telescopes at Parkes, Narrabri and Mopra and will be used by astronomers from around the world.

"Research networks like AARNet are essential in providing the connectivity needed to utilise modern supercomputers," says Professor Steven Tingay, Deputy Director MRO at the International Centre for Radioastronomy Research. As part of the development of technology for the SKA, researchers have designed, developed and built an advanced, low-frequency aperture array telescope, known as the Murchison Widefield Array (MWA). Professor Tingay explains "The MWA project is a collaboration of 13 institutions across Australia, India, New Zealand and the US." A key aspect of the telescope is that all the individual dishes will be used together, to form one huge 'virtual telescope', using a technique called very long baseline interferometry.

Australia

Fast, reliable telecommunications connectivity is critical for enabling the processing of vast data generated by the ASKAP radio telescope at the MRO in Western Australia. The SKA as a whole will generate data into the Terabits-per-second range where extremely fast networks are essential for its operation. Utilizing AARNet, the ASKAP project and the SKA will investigate the sights and sounds coming from a vast symphony of stars, in outback Western Australia.

ASKAP will make substantial advances in key areas of SKA science, including:

- Galaxy formation and gas evolution in the nearby Universe through extragalactic HI surveys
- Evolution, formation and population of galaxies across cosmic time via high resolution, confusion limited, continuum surveys
- Characterisation of the radio transient sky through detection and monitoring (including VLBI) of transient and variable sources, and
- Evolution of magnetic fields in galaxies over cosmic time through polarization surveys

This article was made possible with thanks to: CSIRO's Australia Telescope National Facility and the The Square Kilometre Array Organisation. Information and photos are sourced from

http://www.skatelescope.org/the-project and http://www.atnf.csiro.au/projects/askap/science.html

http://www.ska.ac.za/media/africasite.php

eduroam and Japan's SAML-based federation and on the contribution of eduroam in re-establishing research and education connectivity following the Japan earthquake and tsunami in 2011.

The European and US federated identity agencies also participated in APAN33, to engender greater engagement of the APAN region with EU and US federated initiatives. Nicole Harris from JISC reported on work being undertaken to harmonise SAML-based Federation Policy across Europe, and the prospect of broader policy harmonisation for the three federated identity services.

APAN34 was held in in Colombo, Sri Lanka, in 2012. In his plenary speech, Professor Tissa Vitharana, The Minister of Technology and Research, stressed the importance of research and technology to improve the economic situation in Sri Lanka. AARNet and the international NREN community can be proud of the part they have played and will continue to play in assisting development in Sri Lanka, by facilitating accessibility to the international community with the work of the APAN Working Group.

Bill Efthimiou from AARNet is the current chair of the Unified Communications Working Group and led the agenda focusing on increased collaboration within the Asian NREN community by leveraging existing Standards compliant IP communications equipment. AARNet and the partner NRENs are constantly improving connectivity, and increasing capacity to many places around the world. Multimedia communications, both audio and video are now mature applications that can take advantage of these networks, whilst reducing International call charges, and improving collaboration and communication amongst our increasingly internationalised research and education community.

The Working Group also acts to develop local expertise with practical demonstrations such as setting up an open source SIP servers (based on Kamailio) for peering with the APAN SIP server and how to configure ENUM using BIND9. Presentations can be found at: http://www.apan.net/meetings/Colombo2012/Session/UnifiedComm.php

IT Team at The University of South Pacific and James Sankar of AARNet

eResearch Australasia Conference 2012, Sydney

Megaconference; a 24 hour world-wide event

The Megaconference was again held in December. This is a worldwide event, consisting of videoconferencing endpoints on research and education networks utilising their considerable reach and communication abilities to connect participants in different parts of the globe. It brings together participants in a collaborative and collegiate environment to share stories (ranging from cultural to technical) and learn from each other whilst using the event as a springboard for technical developments in managing large scale videoconferences across a global audience. The event was last run in June 2011 as part of the World IPv6 Day celebrations that year and pushed forward the adoption of IPv6 across the world.

Over the years, the Megaconference has provided the NREN community with a venue to test the limits of video collaboration technology while making personal connections around the world. The theme in 2012 continued where the last Megaconference left off: "Breaking Down the Barriers: Global Connections". Subjects covered included: LIVE from Asia to Europe and Africa, the National Dali High School & Ghana, from Taiwan, Music Teaches Everything in the Global Classroom from Cleveland Institute of Music Cleveland, US and A Virtual Visit to the ATLAS Experiment at CERN Geneva, Switzerland.

AARNet Advisory Committee

2012 Annual Report

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

During 2012 the AAC met on five occasions, providing advice to the AARNet Board and APL senior management on a range of operational and strategic matters. Meetings were held in Brisbane, Perth, and 3 times by Videoconference. Each face-to-face meeting included a visit from a local Researcher to better understand how AARNet services enable members and the research community.

Initiatives

In 2011, AAC activities were focused on advising AARNet on the implementation of the Strategic Plan, in 2012 we focused on feeding into the revised AARNet Strategic Plan. This included exploring several new initiatives: Expanding and extending NOC Services, Planning for AARNet4, Enterprise Consulting Services, Video & Unified Comms, Cloud Services, Sustainability of value added services, and Considering International Connectivity upgrades for Asia. The AAC also considered several strategic issues: Customer Engagement, What value added services should AARNet focus on, how can these value added services be sustainable for both AARNet and their customers.

Charging Model

The AAC Charging Committee assisted APL in moving the charging model to what is now largely a subscription based service. This has been achieved despite the substantial increases in the amount of network traffic year-on-year. The charging rate per gigabyte remains the same from 2011 to 2012. AARNet now provide a 3 year forecast for charging to assist members with their budget planning.

AARNet can be justifiably proud of its successes during this year which has been very rewarding for me, as the Chair of AAC, in particular with respect to the level of customer engagement and developing the sustainable value added services for the future. I would like to thank members of the AAC for their commitment and contributions during 2012. In December 2012 I resigned as chair and Peter Nikoletatos (CIO, ANU) has been selected as the new chair. I would like to also thank the committee, the senior management team and board for their support during my time as AAC Chair and wish them every success for the future.

Paul Campbell

AAC Chair

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 Sydney
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 University
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 as at 31 March 2013

Emeritus Professor GR Sutton AO
Chair of the Board

Professor MN Barber

Mr OJ Barrett

Mr CM Hancock
Chief Executive Officer

Professor L Kristjanson

Mr P Nikoletatos

Mr N Poole

Mr JF Rohan

Emeritus Professor MS Wainwright AM

Professor IR Young AO

Mr P Campbell
(to 28 November 2012)

Mr KBR Adams
(to 14 May 2012)

Dr I Tebbett
(appointed on 14 May 2012)

AARNet Pty Ltd Financial Report 2012

for the year ended 31 December 2012

ABN 54 084 540 518

Contents

Directors' report 31 December 2012

Your Directors present their report on the Company, AARNet Pty Limited ("AARNet"), for the year ended 31 December 2012.

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

Mr N Poole (member of the Nomination and Remuneration Committee)

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

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

Professor IR Young AO

Mr P Campbell was a director from the beginning of the financial year until his resignation on 28 November 2012. Mr KBR Adams was a director from the beginning of the financial year until his resignation on 14 May 2012.

Dr I Tebbett was appointed a director on 14 May 2012 and continues in office at the date of this report.

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 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 (2011: 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% (2011: 41.3%);

(b) network availability at 99.941% (2011: 99.977%) was marginally below target (99.95%) due to a small number of outages in sectors of the network where diverse (redundant) links were not provided due to the disproportionate cost involved.

Over the five years up to and including 2012 telecommunications traffic across the AARNet network has grown at an annualised rate of 49.5%. Despite this growth, Members' access and subscriptions have, over the same period, only increased at an annualised rate of 3.2%. In 2012, Members' access and subscriptions charges were only 1.9% higher than in 2011. This has provided increasing value for money for Members and Customers.

Network Expansion

During 2012 AARNet significantly expanded its international capacity. A new 10 Gigabits/sec circuit was established between Sydney and AARNet's point of presence in Seattle. In addition, capacity from Sydney to San Jose was increased to 7.5Gbps on a 10Gbps circuit. This increased AARNet's commercial/commodity capacity to North America from 10 to 25 Gigabits/sec. To complement these upgrades to trans-Pacific capacity, one commercial transit and two peering exchange services in North America were also upgraded to 10 Gigabits/sec. Further upgrades to international capacity, backhaul, international transit and peering services are scheduled for 2013.

AARNet also made significant progress in expanding and extending its domestic network. During the year considerable investment was made in capital city infrastructure (particularly in Sydney) and in lighting optical fibre between Adelaide and Perth. When completed, these projects will provide a quantum upgrade to domestic bandwidth, particularly between the east and west coasts of Australia.

Investment in network enhancements during 2012 was assisted with funding under 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. Federal funding of this nature greatly assists AARNet and its Members.

The investments referred to above will underpin the next generation of the AARNet network known as "AARNet4". AARNet4 is designed to meet the projected growth in requirements and demand for AARNet services from Members and, in particular, to:

(a) increase the capacity of the network to serve the growing needs of Members;

(b) increase the reach of the AARNet network within Australia;

(c) enhance the quality of network services and the level of network availability provided to Members;

(d) provide a platform for delivery of enhanced services in line with AARNet's Strategic Plan.

Planning and other preliminary work associated with the AARNet4 project is well advanced. The continued resilience and performance of the AARNet3 network enabled AARNet to defer purchasing equipment for AARNet4 from 2012 to 2013. This deferral allowed AARNet to progress activity on the international and domestic expansions referred to above, and also had a positive impact on AARNet's year end cash holdings.

Subscriptions, Contributions and Revenues

The Board have considered it prudent to adopt a new accounting policy for the recognition of revenues related to certain infrastructure projects (those which involve the construction of infrastructure and the associated delivery of services across that infrastructure). The change in policy and the rationale for the change are set out in note 1(c) to the financial statements. The financial effect this change has on the current year's results and on certain prior years' results is detailed in note 26 to the financial statements. The revenue figures quoted in this report reflect the adoption of that new policy.

Overall, AARNet's service revenues (for delivery of telecommunications services and infrastructure projects) for 2012 were $53,350,178 (2011: $55,230,724). Within this total, Telecommunications Revenues were $49,876,094 (2011: $50,992,534). The reduction in Telecommunications Revenues from 2011 results from fees paid to a third party to use further traffic capacity on that party's fibre cable system. AARNet pays these fees, then recovers the cost from certain Members and other Customers, such that Telecommunications Revenue includes the recoveries while Telecommunications Expenses include the offsetting cost. In 2012 these recoveries and costs were substantially lower than 2011 and, excluding the effect of these recoveries, Telecommunications Revenues for 2012 increased by 4.7% over 2011.

The underlying growth in service revenues (from both Members and Customers) exceeds the rate of increase in Members' access charges and subscription charges noted above. This reflects AARNet's strategy to expand services to Customers who are not Members and thus capture economies of scale for the benefit of Members.

Revenue from Infrastructure Construction Projects declined by 18% from the level generated in 2011. The reduction reflects the extent of resources devoted during 2012 to projects (primarily funded by the Commonwealth's NRN Program) which are developing AARNet's network (refer above). The focus on NRN projects resulted in a lower level of activity on customer infrastructure projects which is reflected in reduced infrastructure project revenues. However, amounts from the NRN Program totalling $7,505,320 were recognised as contributions during 2012.

Telecommunication and Other Expenses

Telecommunications expenses reduced to $17,671,653 in 2012 (2011: $18,862,753). The reduction reflects the third party costs and recoveries referred to above. Excluding the effect of those fees, telecommunications costs rose by 12.8%, a much faster rate than the rate of increase in related revenues. This increase was driven by the growing cost of traffic (particularly off-net commercial internet traffic) and the costs of increased leased capacity within the AARNet network.

Depreciation and Amortisation costs, for both the core AARNet network and infrastructure projects, were lower than in 2011. This reflects reduced depreciation charges as major network investments made some time ago become fully depreciated, however, this was partly offset by increased amortisation of the capitalised value of Indefeasible Rights to Use international traffic paths which flow from increased international capacity brought on stream in 2012 (refer to above).

Employee benefits expenses, both generally and in relation to infrastructure construction projects, increased during 2012 with part of the increase due to higher staffing levels than in 2011 (with persons recruited during 2011 receiving a full year's salary, on-costs and entitlements during 2012).

Administration costs are markedly higher than in 2011. However this is primarily due to the mark-to-market valuation of forward foreign exchange contracts used to hedge against adverse movements in the value of the Australian Dollar. The international capacity purchased by AARNet is typically priced in USD and, with additional international capacity commissioned during 2012, the board approved an increase in AARNet's foreign exchange hedging program. AARNet accounts for the movements in the value of the instruments used to hedge this exposure as an administrative cost (or gain). Without this cost, the increase in administration costs from 2011 to 2012 is 5.3%.

Accumulated Surplus and Reserves

In 2012 AARNet recorded a surplus (Net Income) of $15,339,470 (2011: $9,851,978). Note these figures also reflect the change in accounting policy described in notes 1(c) and 26 to the financial statements.

In the Board's view, it is prudent for AARNet to aim to generate a surplus in order that future investments in network capability and services may be funded without calling on the Members to contribute further equity to the company. Surpluses earned in recent years, aided by conservative financial management, have accumulated into significant holdings of cash and investments.

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

AARNet intends to use these accumulated funds to:

(a) finance future investments in

  (i) infrastructure and equipment to expand the reach and capability of AARNet's network; and

  (ii) technology to enhance the delivery of services AARNet delivers to Members and Customers.

(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) which, at year end, exceeded $103m (refer note 2 to the financial statements).

In the short-term, the costs of the AARNet4 project will also be met, in part, by drawing on these accumulated funds.

Net Assets

Net assets at 31 December 2012 were $107,930,680 (2011: $92,297,468). The increase represents the Net Income for 2012 plus the change in value of available-for-sale financial assets during 2012.

Strategic Direction

During 2012 AARNet refined its Strategic Plan and has established the following areas of strategic focus:

(a) Delivering Australia's advanced research and education network;

(b) Growing the research and education community;

(c) Building Services Capability.

In addition, the Strategic Plan, also calls for AARNet to:

(d) Ensure financial sustainability; and

(e) Enable a creative, connected work environment.

Significant changes in the state of affairs

There were no significant changes in the state of affairs which have arisen since 31 December 2012 or since that have significantly affected or may significantly affect the results of those operations or the state of affairs in subsequent years.

Matters subsequent to the end of the financial year

Except for matters discussed under the headings 'Review of operations' and for the potential exemption from payroll tax discussed below, no other matter or circumstance has arisen since 31 December 2012 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 2013, reflecting the historical trends experienced by the company.

AARNet is also considering making an application for exemption from payroll tax in certain of the states in which it operates. While there is no certainty that any such application would be successful, if exemptions were to be granted AARNet would benefit from a significant reduction in employment related costs.

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 $17,424 (2011: $17,265) 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.

Directors' report 31 December 2012 (continued)

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.

Emeritus Professor GR Sutton AO
Director

Mr CM Hancock
Director

Melbourne
26th March 2013

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Auditor's Independence Declaration

As lead auditor for the audit of AARNet Pty Limited for the year ended 31 December 2012, 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.

This declaration is in respect of AARNet Pty Limited during the period.

Scott Walsh
Partner
PricewaterhouseCoopers

Sydney
26 March 2013

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This financial report covers AARNet as an individual entity. The financial report is presented in the Australian currency.

AARNet Pty Limited is a company limited by shares, incorporated and domiciled in Australia. Its registered office and principal place of business is:

AARNet Pty Limited
Level 2, Building 1, Binary Centre
3 Richardson Place
North Ryde NSW 2113

A description of the nature of AARNet's operations and its principal activities is included in the directors' report on pages 2 to 6, which is not part of this financial report.

Through the use of the internet, we have ensured that our corporate reporting is timely, complete, and available globally at minimum cost to AARNet. All press releases, financial reports and other information are available on our website: www.aarnet.edu.au

For queries in relation to our reporting please call (02) 9779 6968 or email accounts@aarnet.edu.au

Income statement

For the year ended 31 December 2012

	Notes	31 December 2012 $	31 December 2011 $
Telecommunications revenue	4	49,876,094	50,992,534
Infrastructure project construction revenue	4	3,474,084	4,238,190
Total services revenue	4	53,350,178	55,230,724
Other revenue:			
Interest	4	2,858,252	2,448,766
Dividends	4	197,977	53,795
Other income	4	443,044	198,034
Total - Other revenue		3,499,273	2,700,595
Contributions - National Research Network Program		7,505,320	-
Contributions - assets donated		-	1,019,153
Total revenue and income		64,354,771	58,950,472
Telecommunications expenses		(17,671,653)	(18,862,753)
Depreciation and amortisation - Telecommunications	5	(9,455,545)	(9,683,695)
Employee benefits expense - Telecommunications		(8,395,875)	(7,413,295)
Administration - Telecommunications		(7,586,345)	(5,801,683)
Infrastructure project construction		(1,836,242)	(2,942,158)
Depreciation and amortisation - Infrastructure projects	5	(1,680,768)	(2,468,252)
Employee benefit expense - Infrastructure Development Group		(1,755,499)	(1,353,320)
Administration - Infrastructure Development Group		(511,080)	(453,728)
Other expenses		(122,294)	(119,610)
Total expenses		(49,015,301)	(49,098,494)
Net income		15,339,470	9,851,978

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

Refer to note 1(c) and note 26 for an explanation of the change in accounting policy and retrospective adjustments.

Statement of comprehensive income

For the year ended 31 December 2012

	31 December 2012 $	31 December 2011 $
Net income for the year	15,339,470	9,851,978
Movement in the fair value of available-for-sale financial assets	293,742	(195,465)
Other comprehensive income for the year, net of tax	293,742	(195,465)
Total comprehensive income for the year	15,633,212	9,656,513
Total comprehensive income for the year is attributable to:		
Owners of AARNet Pty Ltd	15,633,212	9,656,513

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

Refer to note 1(c) and note 26 for an explanation of the change in accounting policy and retrospective adjustments.

Balance sheet

as at 31 December 2012

	Notes	31 December 2012	31 December 2011	31 December 2010
ASSETS		$	$	$
Current assets				
Cash and cash equivalents	7	33,059,351	26,625,327	45,546,978
Trade receivables	8	15,431,241	15,610,140	13,859,539
Held-to-maturity investments	9	7,502,412	1,975,601	-
Accrued income	10	3,555,365	1,321,913	4,174,839
Derivative financial instrument		-	59,401	-
Total current assets		59,548,369	45,592,382	63,581,356
Non current assets				
Receivables	11	131,866	137,771	463,839
Available-for-sale financial assets	12	4,589,821	3,787,561	-
Held to maturity investments	13	14,418,274	18,897,366	-
Other financial assets – Non-controlling investment in Smart Services CRC Pty Limited		1	1	1
Property, plant and equipment	14	37,142,318	21,815,097	20,312,601
Intangible assets	15	55,893,929	52,264,422	47,480,087
Total non-current assets		112,176,209	96,902,218	68,256,528
Total assets		171,724,578	142,494,600	131,837,884
LIABILITIES				
Current liabilities				
Payables	16	9,560,443	3,121,117	5,988,016
Income in advance	17	34,130,317	31,038,488	28,187,868
Other liabilities		55,562	114,648	49,776
Interest bearing liabilities		-	-	1,425,692
Provisions	18	1,888,215	1,463,629	1,239,062
Derivative financial instrument		485,233	-	289,857
Total current liabilities		46,119,770	35,737,882	37,180,271
Non-current liabilities				
Provisions	19	414,113	384,589	278,579
Income in advance	21	16,692,050	14,074,661	11,738,079
Derivative financial instrument		567,965	-	-
Total non-current liabilities		17,674,128	14,459,250	12,016,658
Total liabilities		63,793,898	50,197,132	49,196,929
Net assets		107,930,680	92,297,468	82,640,955
EQUITY				
Contributed equity	22	39,039	39,039	39,039
Reserves		98,277	(195,465)	-
Retained earnings	23	107,793,364	92,453,894	82,601,916
Capital and reserves attributable to equity holders of AARNet		107,930,680	92,297,468	82,640,955
Total equity		107,930,680	92,297,468	82,640,955

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

Refer to note 1(c) and note 26 for an explanation of the change in accounting policy and retrospective adjustments.

Statement of changes in equity

For the year ended 31 December 2012

	Notes	31 December 2012 $	31 December 2011 $
Total equity at the beginning of the financial year		**92,297,468**	82,640,955
Changes in the fair value of available-for-sale financial assets, net of tax		**293,742**	(195,465)
Total comprehensive income for the year	23	**15,339,470**	9,851,978
Total recognised income and expense for the year		**15,633,212**	9,656,513
Total equity at the end of the financial year		**107,930,680**	92,297,468

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

Refer to note 1(c) and note 26 for an explanation of the change in accounting policy and retrospective adjustments.

Cash flow statement

For the year ended 31 December 2012

	Notes	31 December 2012 $	31 December 2011 $
Cash flows from operating activities			
Receipts from customers (inclusive of goods and services tax)		**71,637,845**	73,619,279
Payments to suppliers and employees (inclusive of goods and services tax)		**(42,212,090)**	(51,119,665)
		29,425,755	22,499,614
Interest paid		**(19)**	(106,984)
Net cash inflow (outflow) from operating activities	27	**29,425,736**	22,392,630
Cash flows from investing activities			
Payments for property, plant and equipment		**(14,290,640)**	(7,267,902)
Payments for intangible assets		**(10,198,574)**	(10,763,761)
Payments for available-for-sale financial assets		**(1,734,633)**	(4,371,605)
Payments for held-to-maturity investments		**(4,575,837)**	(23,894,644)
Proceeds from available-for-sale financial assets		**1,251,619**	334,203
Proceeds from held-to-maturity investments		**3,480,000**	3,000,000
Dividends received		**165,787**	53,795
Interest received		**2,910,566**	3,021,327
Net cash (outflow) inflow from investing activities		**(22,991,712)**	(39,888,588)
Cash flows from financing activities			
Payments of finance lease liabilities		**–**	(1,425,692)
Net cash outflow from financing activities		**–**	(1,425,692)
Net (decrease)/increase in cash and cash equivalents		**6,434,024**	(18,921,651)
Cash and cash equivalents at the beginning of the financial year		**26,625,327**	45,546,978
Cash and cash equivalents at end of year	7	**33,059,351**	26,625,328

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

1 Summary of significant accounting policies

The principal accounting policies adopted in the preparation of the financial report are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

(a) Basis of preparation

This general purpose financial report has been prepared in accordance with Australian equivalents to International Financial Reporting Standards (AIFRS), other authoritative pronouncements of the Australian Accounting Standards Board, Urgent Issues Group Interpretations and the *Corporations Act 2001* as applicable for not-for-profit entities.

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

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.

Critical accounting estimates
The preparation of financial statements in conformity with AIFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying AARNet'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 (see further below).

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.

Change in accounting policy
The policy of recognising income on Service Agreements over the period of the agreement represents a change from the policy adopted previously. Under the previous policy, AARNet recognised, as income, the full value of the infrastructure service component of the Service Agreement, at the point at which the service was available for use by the customer. One effect of this policy was that AARNet did not recognise any liability for the obligation to provide future services to customers in relation to the unexpired contracted portion of each Service Agreement. In the view of the directors, the growing value of Service Agreements (which began to be written during 2008) is now at such a point that it is no longer appropriate to continue such a policy (and, in particular, to continue to not recognise the related obligation to provide services which customers have already paid for).

Accordingly, AARNet has elected to change its accounting policy in the current year with respect to Service Agreements set out above with retrospective effect from 1 July 2008, being the commencement date of the previous policy.

The effect of adopting this revised policy is shown in note 26 to these financial statements. These financial statements are presented on the basis that the policy now adopted had been in place since 1 July 2008.

(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 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 cash flow statement presentation purposes, 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 doubtful debts. 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 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 trade and other receivables (note 8) and other debtors (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 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.

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 the 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 costs 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 group of financial assets is impaired. A financial asset or 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 and loss is removed from equity and recognised in profit and loss.

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

If the fair value of a debt instrument classified as available-for-sale 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.

(l) Property, plant and equipment

Property, plant and equipment are stated at historical cost less depreciation for all assets except contributed assets which are stated at fair value. 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 residual values, over their estimated useful lives, as follows:

>	Leasehold improvements	10 years
>	Office equipment	3 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 each reporting date.

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 GST except where the amount of GST incurred is not recoverable from the Australian Taxation Office (ATO). In these circumstances the GST is recognised as part of the cost of the acquisition of the asset or as part of an 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) New accounting standards and interpretations

AARNet has assessed the impact of new accounting standards and interpretations and did not identify any significant impact.

2 Commitments

(a) Expenditure commitments

	31 December 2012 $	31 December 2011 $
Commitments in relation to expenditure contracted for at the reporting date but not recognised as liabilities, payable:		
Within one year	11,937,524	6,681,109
Later than one year but not later than five years	4,471,209	3,010,568
Later than five years	741,543	77,000
	17,150,276	9,768,677

(b) Lease commitments – AARNet as lessee

(i) Non-cancellable operating leases

Commitments for minimum lease payments in relation to non-cancellable operating leases are payable as follows:		
Within one year	11,792,264	18,640,971
Later than one year but not later than five years	50,576,303	33,389,208
Later than five years	41,214,051	15,993,570
Commitments not recognised in the financial statements	103,582,618	68,023,749

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 Directors have assumed in the ordinary course of business that AARNet's customers will continue to use AARNet's services into the foreseeable future.

(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) Infrastructure projects completion

AARNet estimates the percentage of each project complete at the Balance Sheet date and allocates revenues and expenses accordingly.

(iv) 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.

AARNet carries contributed non-monetary assets at fair value. Fair value is based on management's estimate of the likely price it would have had to pay to acquire such assets supported by evidence where available from the relevant vendor.

4 Revenue

	31 December 2012 $	31 December 2011 $
Services revenue		
Telecommunications revenue	47,960,537	49,653,668
Infrastructure service fees	1,915,557	1,338,866
Infrastructure project construction revenue	3,474,084	4,238,190
	53,350,178	55,230,724
Other revenue		
Interest	2,858,252	2,448,766
Dividends	197,977	53,795
Other income	443,044	198,034
	3,499,273	2,700,595
	56,849,451	57,931,319

Refer to note 1(c) and note 26 for an explanation of the change in accounting policy and retrospective adjustments.

5 Expenses

	31 December 2012 $	31 December 2011 $
Depreciation		
Office equipment	946,445	776,666
Leasehold improvements	162,994	175,741
Communication assets	2,748,072	3,110,148
Software	68,935	90,915
Leased communication assets	573,085	2,019,051
Total depreciation	4,499,531	6,172,521
Amortisation		
Intangibles - Indefeasible Rights to Use traffic paths	6,636,781	5,979,426
Total amortisation	6,636,781	5,979,426
Total depreciation and amortisation	11,136,312	12,151,947
Finance costs		
Interest and finance charges paid/payable	19	1,777
Foreign exchange losses	94,864	523,160
Loss (gain) on forward exchange contracts	1,112,599	(349,258)
Loss on sale of available-for-sale financial assets	72,235	54,376
Loss on disposal of assets	1,923	41,780
Amortised interest expense	48,118	21,677
Rental expense relating to operating leases		
Minimum lease payments – premises	956,594	768,892
Superannuation expense	1,206,938	1,017,580

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 methods to measure different types of risk to which it is exposed. These methods include sensitivity analysis in the case of interest rate and foreign exchange risks and ageing 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. 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 USD, and to a smaller extent, to the EUR.

AARNet holds foreign currency and enters into foreign 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 USA to Australia and for equipment purchases. These requirements are expected to rise over time.

At year end, AARNet held USD0.96m (AUD1.00m) in USD denominated bank accounts and EUR0.02m (AUD0.03m) in a EUR denominated bank account as part of its strategy to minimise the financial effects of foreign currency fluctuations. AARNet's Board monitors the company's hedging strategy on a continuing basis.

Sensitivity

At 31 December 2012, 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 $189,000 lower/$$287,000 higher (2011: $18,000 higher/$248,000 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 2012, 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 $321,000 lower/higher (2011: $152,000 lower/higher), as a result of higher/lower interest income from cash and cash equivalents. The 2011 sensitivity is lower as a lesser value was held in cash securities in that year. Total equity would have changed by the same amounts.

Held-to-maturity investments

At 31 December 2012, 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 $140,000 lower/higher (2011: $114,000) as a result of higher/lower 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 predominately of equities listed on the ASX. At 31 December 2012, had the ASX uniformly been -/+1% higher/lower with all other variables held constant, Total Comprehensive Income for the year would have been $46,000 higher/lower (2011: $38,000) as a result of higher/lower income from available-for-sale financial assets.

(iv) Summarised sensitivity analysis

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

6 Financial risk management (cont.)

		Interest rate risk				Foreign exchange risk				Other price risk			
		-100bps		+100bps		-10%		+10%		-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, 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 financial assets	2,111,825	-	-	-	-	-	-	-	-	(45,898)	(45,898)	45,898	45,898
Other assets	147,279	-	-	-	-	-	-	-	-	-	-	-	-
Accrued income	3,555,365	-	-	-	-	-	-	-	-	-	-	-	-
Derivative financial instrument	-	-	-	-	-	-	-	-	-	-	-	-	-
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)		(460,992)	(460,992)	460,992	460,992	44,885	44,885	95,095	95,095	(45,898)	(45,898)	45,898	45,898

6 Financial risk management (cont.)

		Interest rate risk				Foreign exchange risk				Other price risk			
		-100bps		+100bps		-10%		+10%		-1%		+1%	
31 December 2011	Carrying amount $	Profit $	Equity $	Profit $	Equity $	Profit $	Equity $	Profit $	Equity $	Profit $	Equity $	Profit $	Equity $
Financial assets													
Cash and cash equivalents	26,625,327	(151,903)	(151,903)	151,903	151,903	9,098	9,098	255,062	255,062	-	-	-	-
Accounts receivable	13,976,509	-	-	-	-	-	-	-	-	-	-	-	-
Held-to-maturity investments	11,400,000	(114,000)	(114,000)	114,000	114,000	-	-	-	-	-	-	-	-
Available-for-sale financial assets	3,787,561	-	-	-	-	-	-	-	-	(37,876)	(37,876)	37,876	37,876
Other assets	150,752	-	-	-	-	-	-	-	-	-	-	-	-
Accrued income	1,321,913	-	-	-	-	-	-	-	-	-	-	-	-
Derivative Financial Instrument	59,401	-	-	-	-	6,170	6,170	(5,049)	(5,049)	-	-	-	-
Financial liabilities													
Trade payables	1,447,613	-	-	-	-	2,307	2,307	(1,888)	(1,888)	-	-	-	-
Other liabilities	1,505,213	-	-	-	-	-	-	-	-	-	-	-	-
Total increase/ (decrease)		(265,903)	(265,903)	265,903	265,903	17,575	17,575	248,125	248,125	(37,876)	(37,876)	37,876	37,876

6 Financial risk management (cont.)

(b) Credit risk

Credit risk arises from AARNet's holdings of cash and cash equivalents, term deposits, 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, hybrids 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 partly 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) and these are 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

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

As of 1 January 2010, AARNet Pty Ltd has adopted the amendment to AASB 7 *Financial Instruments: Disclosures* which requires disclosure of fair value measurements by level of the following fair value measurement hierarchy:

(a) 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 (as prices) or indirectly (derived from prices) (level 2), and

(c) inputs for the asset or liability that are not based on observable market data (unobservable inputs) (level 3)

AARNet holds forward exchange contracts which are valued at fair value under level 2 methodology.

7 Current assets – Cash and cash equivalents

	31 December 2012 $	31 December 2011 $
Cash at bank and in hand (AUD)	18,564,813	6,433,201
Cash at bank (USD and EUR)	994,031	1,160,097
Deposits at call - all denominated in AUD	13,500,507	19,032,029
	33,059,351	26,625,327

(a) Cash at bank and on hand

Cash at bank and on hand are held at interest rates varying between 0.05% and 3.60% (2011: 0.15% and 4.13%). During the year, cash at bank and on hand is transferred to term deposits.

(b) Deposits at call

Interest bearing deposits at call attracted interest rates between 3.50% and 6.00% (2012: 4.25% and 6.00%). These deposits have an average maturity of 67 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 2012 $	31 December 2011 $
Trade receivables	13,804,672	13,976,509
Other debtors	147,279	150,752
Prepayments	1,479,290	1,482,879
	15,431,241	15,610,140

As of 31 December 2012, no trade receivables are impaired or considered uncollectable. No amounts have been outstanding for more than 90 days. The other amounts relate to a number of customers for whom there is no history of default, and it is expected that these amounts will be received when due.

(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 2012 $	31 December 2011 $
Bonds	2,502,412	895,601
Term deposits	5,000,000	1,080,000
	7,502,412	1,975,601

10 Current assets – Accrued Income

	31 December 2012 $	31 December 2011 $
Infrastructure projects	2,921,447	428,551
Other	351,208	558,338
Interest on cash and cash equivalents and held-to-maturity investments	282,710	335,024
	3,555,365	1,321,913

11 Non-current assets – Receivables

	31 December 2012 $	31 December 2011 $
Other debtors	109,877	33,787
Prepayments	21,989	103,984
	131,866	137,771

(a) Fair values

The fair value of non-current receivables is materially the same as their carrying amounts.

(b) Credit risk

There is no concentration of credit risk with respect to current and non-current receivables, as AARNet has a small number of low credit risk customers. See note 6.

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

	31 December 2012 $	31 December 2011 $
Equity securities	2,111,826	1,805,261
Bonds	2,477,995	1,982,300
	4,589,821	3,787,561

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

	31 December 2012 $	31 December 2011 $
Bonds	13,418,274	17,397,366
Term deposits	1,000,000	1,500,000
	14,418,274	18,897,366

14 Non-current assets – Property, plant and equipment

	Leasehold improvements $	Office equipment $	Leased communication assets $	Communication assets $	Software $	Total $
At 1 January 2011						
Cost	1,700,997	1,854,433	14,966,979	25,709,785	695,265	44,927,459
Accumulated depreciation	(744,050)	(823,449)	(12,930,651)	(9,563,398)	(553,310)	(24,614,858)
Net book amount	956,947	1,030,984	2,036,328	16,146,387	141,955	20,312,601
Year ended 31 December 2011						
Opening net book amount	956,947	1,030,984	2,036,328	16,146,387	141,955	20,312,602
Additions	314,830	1,727,846	1,111,615	4,562,503	–	7,716,795
Disposals	(41,780)	–	–	–	–	(41,780)
Depreciation charge	(175,741)	(776,666)	(2,019,051)	(3,110,148)	(90,915)	(6,172,520)
Closing net book amount	1,054,257	1,982,165	1,128,892	17,598,743	51,040	21,815,097
At 31 December 2011						
Cost	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

	Leasehold improvements $	Office equipment $	Leased communication assets $	Communication assets $	Software $	Total $
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)	(946,445)	(573,085)	(2,748,072)	(68,935)	(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	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

15 Non-current assets – Intangible assets

	Indefeasible right to use capacity of traffic path $	Total $
At 1 January 2011		
Total payments	78,873,572	78,873,572
Accumulated amortisation on a straight line basis	(31,393,485)	(31,393,485)
Net book amount	47,480,087	47,480,087
Year ended 31 December 2011		
Opening net book amount	47,480,087	47,480,087
Additions	10,763,761	10,763,761
Amortisation charge	(5,979,426)	(5,979,426)
Closing net book amount	52,264,422	52,264,422
At 31 December 2011		
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	52,264,422
Year ended 31 December 2012		
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
At 31 December 2012		
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

During the year, additions to intangible assets totalled $10,266,288. These additions were the result of recognising further payments for Indefeasible Rights to Use traffic paths.

16 Current liabilities – Payables

	31 December 2012 $	31 December 2011 $
Trade payables and accruals	9,560,443	3,121,117

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

17 Current liabilities – Income in advance

	31 December 2012 $	31 December 2011 $
Infrastructure projects	6,080,427	7,952,876
Other	1,052,335	1,436,137
Infrastructure service fees	2,566,038	-
Subscriptions	24,431,517	21,649,475
	34,130,317	31,038,488

Refer to note 1(c) and note 26 for an explanation of the change in accounting policy and retrospective adjustments.

18 Current liabilities – Provisions

	31 December 2012 $	31 December 2011 $
Employee benefits	1,888,215	1,463,629

19 Non-current liabilities – Provisions

	31 December 2012 $	31 December 2011 $
Employee benefits	197,702	165,146
Make good on leased premises	216,411	219,443
	414,113	384,589

(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 $
2012		
Non-current liabilities – Provisions		
Carrying amount at start of year	219,443	219,443
Reduction in provision recognised	(3,032)	(3,032)
Carrying amount at end of year	216,411	216,411

	Make good on leased premises $	Total $
2011		
Non-current liabilities – provisions		
Carrying amount at start of year	174,454	174,454
Additional provision recognised	44,989	44,989
Carrying amount at end of year	219,443	219,443

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 2012 the assets of the DBD in aggregate were estimated to be $2,010.8 million in deficiency of vested benefits. 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 2012 the assets of the DBD in aggregate were estimated to be $906.8 million in deficiency of accrued benefits. 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 15 November 2012 on the actuarial investigation of the DBD as at 30 June 2012. The financial assumptions used were:

	Vested benefits p.a.	Accrued benefits p.a.
Gross of tax investment return – DBD pensions	5.85%	7.50%
Gross of tax investment return – commercial rate indexed pensions	3.40%	3.40%
Net of tax investment return – non pensioner members	5.25%	5.25%
Consumer Price Index	2.75%	2.75%
Inflationary salary increases short-term (2 years)	5.00%	5.00%
Inflationary salary increases long-term	3.75%	3.75%

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

The Defined Benefit Division as at 30 June 2012 is therefore in an "unsatisfactory financial position" as defined by SIS Regulation 9.04. An "unsatisfactory financial position" for a defined benefit fund is defined as when 'the value of the assets of the Fund is inadequate to cover the value of the liabilities of the Fund in respect of benefits vested in the members of the Fund'. The Actuary and the Trustee have followed the procedure required by Section 130 of the SIS Act when funds are found to be in an unsatisfactory financial position.

The actuary currently believes, in respect of the long-term financial condition of the Fund, that assets as at 30 June 2012, together with current contribution rates, are expected to be sufficient to provide for the current benefit levels for both existing members and anticipated new members if experience follows the "best estimate" assumptions.

Clause 34 was initiated following both the December 2008 and December 2011 actuarial investigation and it has again been initiated following the 30 June 2012 actuarial investigation.

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 2012 $	31 December 2011 $
Infrastructure service fees	10,153,415	-
Infrastructure projects	2,935,315	10,707,994
Other	3,603,320	3,366,667
	16,692,050	14,074,661

Refer to note 1(c) and note 26 for an explanation of the change in accounting policy and retrospective adjustments.

22 Contributed equity

	31 December 2012 Shares	31 December 2011 Shares	31 December 2012 $	31 December 2011 $
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 2011	Opening balance	78	39,039
31 December 2011	Balance	78	39,039
1 January 2012	Opening balance	78	39,039
31 December 2012	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 2012 $	31 December 2011 $
Balance 1 January	92,453,894	82,601,916
Net income for the year	15,339,470	9,851,978
Balance 31 December	107,793,364	92,453,894

24 Key management personnel and related party disclosures

(a) Directors

The following persons were Directors of AARNet during the financial year:

(i) Chairman – non-executive
Emeritus Professor GR Sutton AO (appointed 1 January 2012)

(ii) Executive Directors
Mr C Hancock, CEO

(iii) Non-executive Directors
Mr KBR Adams (resigned 14 May 2012)

Professor MN Barber

Mr OJ Barrett

Mr P Campbell (resigned 28 November 2012)

Professor L Kristjanson (appointed 1 January 2012)

Mr P Nikoletatos

Mr N Poole

Mr JF Rohan

Dr I Tebbett (appointed 14 May 2012)

Emeritus Professor MS Wainwright AM

Professor I Young AO (appointed 1 January 2012)

(b) Key management personnel

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 2012 $	31 December 2011 $
Short-term employee benefits	1,731,422	1,784,850
Post-employment benefits	176,996	162,635
	1,908,418	1,947,485

(c) Other transactions with key management personnel

A director, Prof M Wainwright, is Chair of Smart Services CRC Pty Ltd. AARNet owns one share and makes in-kind contributions to this company. In 2011, Mr C Hancock was appointed 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.

A director, Mr OJ Barrett, was a consultant to the firm Minter Ellison Lawyers during 2011. Minter Ellison has provided legal services to AARNet for several years on normal arm's length commercial terms and conditions.

	31 December 2012 $	31 December 2011 $
Amounts recognised as expense		
Legal fees	534,641	461,027

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

25 Remuneration of auditors

(a) Audit services

	31 December 2012 $	31 December 2011 $
PricewaterhouseCoopers Australian firm		
Audit of financial reports	192,900	187,000
Other services		
Audit of regulatory returns	8,750	8,500
Audit of special purpose reports	22,700	17,900
Accounting advice	-	15,000
Total remuneration for audit and other services	224,350	228,400
Taxation services		
Taxation services	29,850	-
Other services		
Other	5,195	7,395
Total remuneration of PricewaterhouseCoopers Australia	259,395	235,795

26 Effect of Change in Accounting Policy

The company has adopted a revised accounting policy for the recognition of revenue (Infrastructure Service Fees) on certain infrastructure projects, refer note 1(c).

The revised policy has been adopted with retrospective application to 1 January 2008. The effect of adopting the revised policy on the financial results and financial position previously reported for the years ended 31 December 2010 and 2011 is as shown in the tables below:

Effect on prior years Income Statement and Statement of Comprehensive Income

	Original $	Increase/ (Decrease) $	Restated $
2010			
Telecommunications revenue	45,087,459	808,844	45,896,303
Infrastructure project construction revenue	9,583,397	(5,551,514)	4,031,883
Total services revenue	54,670,856	(4,742,670)	49,928,186
Net income	13,451,548	(4,742,670)	8,708,878
Total comprehensive income	13,451,548	(4,742,670)	8,708,878
2011			
Telecommunications revenue	49,653,668	1,338,866	50,992,534
Infrastructure project construction revenue	8,158,117	(3,919,927)	4,238,190
Total service revenue	57,811,785	(2,581,061)	55,230,724
Net income	12,433,039	(2,581,061)	9,851,978
Total comprehensive income	12,237,574	(2,581,061)	9,656,513

Effect on prior years Balance Sheet

	Original $	Increase/ (Decrease) $	Restated $
2010			
Current liability: Income in advance	27,228,366	959,502	28,187,868
Non-current liability: Income in advance	6,258,164	5,479,915	11,738,079
Total liabilities	42,757,512	6,439,417	49,196,929
Retained earnings	89,041,333	(6,439,417)	82,601,916
Net assets and Total equity	89,080,372	(6,439,417)	82,640,955
2011			
Current liability: Income in advance	29,547,433	1,491,056	31,038,489
Non-current liability: Income in advance	6,545,239	7,529,422	14,074,661
Total liabilities	41,176,655	9,020,478	50,197,133
Retained earnings	101,474,372	(9,020,478)	92,453,894
Net assets and Total equity	101,317,946	(9,020,478)	92,297,468

The effect on the financial results for the year ended 31 December 2012 and the financial position as at 31 December 2012 is as shown below:

Current year Income Statement and Statement of Comprehensive Income under prior policy

	Original $	Increase/ (Decrease) $	Restated $
2012			
Telecommunications revenue	47,960,537	1,915,557	49,876,094
Infrastructure project construction revenue	9,088,616	(5,614,532)	3,474,084
Total service revenue	57,049,153	(3,698,975)	53,350,178
Net income	19,038,445	(3,698,975)	15,339,470
Total comprehensive income	19,332,187	(3,698,975)	15,633,212

Current year Balance Sheet under prior policy

	Original $	Increase/ (Decrease) $	Restated $
2012			
Current liability: Income in advance	31,564,279	2,566,038	34,130,317
Non-current liability: Income in advance	6,538,635	10,153,415	16,692,050
Total liabilities	51,074,445	12,719,453	63,793,898
Retained earnings	120,512,817	(12,719,453)	107,793,364
Net assets and Total equity	120,650,133	(12,719,453)	107,930,680

Refer to note 1(c) for an explanation of the change in accounting policy.

27 Reconciliation of net income to net cash inflow from operating activities

	31 December 2012 $	31 December 2011 $
Net income for the year	15,339,470	9,851,978
Depreciation and amortisation	11,136,313	12,151,947
Contribution income	–	(1,019,153)
Dividend income	(197,977)	(53,795)
Interest received	(2,910,567)	(3,021,327)
Net (gain)/loss on sale of available-for-sale financial assets	(25,504)	54,376
Amortised interest expense	48,119	21,677
Net (gain) loss on sale of non-current assets	1,923	41,780
Decrease (increase) in trade receivables	99,220	(2,067,231)
Decrease (increase) in accrued income	(2,201,262)	2,852,926
Decrease (increase) in prepayments	85,584	642,698
Increase (decrease) in derivative financial instruments	1,112,599	(349,258)
Increase (decrease) in trade payables	833,576	(2,251,651)
Increase (decrease) in other operating liabilities	(59,086)	64,872
Increase (decrease) in provisions	454,110	285,588
Increase (decrease) in income received in advance	5,709,218	2,606,142
Net cash inflow (outflow) from operating activities	29,425,736	19,811,569

Directors' declaration 31 December 2012

In the directors' opinion:

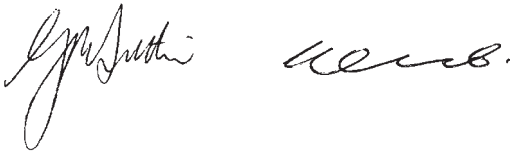
(a) the financial statements and notes set out on pages 9 to 29 are in accordance with the *Corporations Act 2001*, including:

  (*i*) complying with Accounting Standards, the *Corporations Regulations 2001* and other mandatory professional reporting requirements, and

  (*ii*) giving a true and fair view of AARNet's financial position as at 31 December 2012 and of the performance for the financial year ended on that date.

(b) there are reasonable grounds to believe that AARNet 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 the directors.



Emeritus Professor GR Sutton AO
Director

Mr CM Hancock
Director

Melbourne
26th March 2013

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

For the year ended 31 December 2012

Report on the financial report

We have audited the accompanying financial report of AARNet Pty Limited (the company), which comprises the balance sheet as at 31 December 2012, and the income statement, the statement of comprehensive income, statement of changes in equity and cash flow statement 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. These Auditing 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.

Our procedures include reading the other information in the Annual Report to determine whether it contains any material inconsistencies with 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 Limited is in accordance with the *Corporations Act 2001*, including:

(*i*) giving a true and fair view of the company's financial position as at 31 December 2012 and of its performance for the year ended on that date; and

(*ii*) complying with Australian Accounting Standards (including the Australian Accounting Interpretations) and the *Corporations Regulations 2001*.

PricewaterhouseCoopers

Scott Walsh
Partner

Sydney
26 March 2013

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