The Hearing Cooperative Research Centre brings together an internationally unique consortium of research, clinical and industry organisations dedicated to the common purpose of ‘creating sound value’ through research and education – to prevent and better remediate the lost productivity resulting from hearing loss in children and adults.

Objectives

The Objectives of The HEARing Cooperative Research Centre are:

- To enhance Australia’s industrial, commercial and economic growth through a program of sustained, user-driven cooperative research into hearing loss prevention and mitigation; and

- Through education and commercialisation of research findings, to reduce the incidence of hearing loss and increase the effectiveness with which hearing loss and hearing disorders are treated through improved technology, processes or clinical services.

The consortium will also create opportunities for industry growth in hearing healthcare together with improved clinical tools and procedures to meet projected increases in demand for hearing healthcare.

FRONT COVER: Images courtesy of National Acoustic Laboratories; Getty Images; Murdoch Childrens Research Institute.
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EXECUTIVE SUMMARY

On behalf of the Board, I am pleased to report on the progress of the HEARing Cooperative Research Centre (CRC) during the period July 2008 to June 2009.

It has been gratifying to see the organisation grow and consolidate during its second year of operation. I thank my fellow Board members for their diligent work during this time, as well as our core and support Members for their ongoing interest and support.

The HEARing CRC was officially launched in May by Senator the Honourable Kim Carr, Minister for Innovation, Industry, Science and Research. It was a pleasure to speak at this event which also marked the formal opening of our new headquarters, situated in The University of Melbourne’s Audiology, Hearing and Speech Sciences building. The facility, shared with the University’s Department of Otolaryngology, is a new $3.5 million custom-designed refurbishment that contains the largest sound booth in Australia, high specification engineering facilities and state-of-the-art audio-visual equipment for teaching and research. The building provides an excellent work-environment in which the HEARing CRC can grow and develop; currently it houses the Executive Management team and also our sound coding / engineering research.

The launch event, held in the new building, was attended by Prof Graeme Clark AC (pioneer of the Nucleus multichannel cochlear implant), and by distinguished guests from The University of Melbourne as well as by the HEARing CRC Board. Many of our Members and researchers were also able to join us to celebrate this important occasion.

Our research Programs have achieved significant advances during this second year of activity. To cite two instances: novel hearing-loss associated genes have been identified within our forward looking genetic research Program and a provisional patent for technology that will improve own-voice sound quality for hearing aid users. We have been involved also with the establishment of a new magnetoencephalographic (MEG) imaging facility at Macquarie University with custom designed auditory stimulation equipment, facilitating access to this valuable research tool in Australia. As well as utilising new technologies we have been developing them; in particular we have successfully patented a number of sound processing strategies that will be valuable both to the next generation of cochlear implants and hearing aids, and to hearing protection of those who use telephone and computers as a means of communication.

During this period we have seen an increase in the number of PhD students involved in our Research Programs. The innovative and painstaking work carried out by our project teams underpins the success of the HEARing CRC and positions Australia at the forefront of hearing research internationally. It is advantageous that the next generation of researchers will receive high quality training from the committed researchers currently with us.

I note, with pleasure, that the governance structure of the HEARing CRC is now almost complete. We have identified a number of candidates to join the Board as Independent Directors and hope to make two appointments shortly. In addition, we have worked hard to identify suitable, independent candidates for the Chair and membership of the Science Advisory Group and again hope to make appointments in the near future.

With regard to the Board, I would like specially to acknowledge the hard work and valuable contribution of Ms Anthea Green, who resigned from the Board in September 2008. And I welcome Ms Kathryn Greiner who joined us in November 2008.

I particularly thank the two Board Committees, Finance and Audit (chaired by Mr Barry Roberts) and Nominations and Appointments (chaired by Ms Anthea Green and then Ms Kathryn Greiner): they have provided guidance, oversight and valuable advice. On behalf of the Board as well as for myself, I thank the three persons who successively held the position of Company Secretary during this period, Ms Jenni Lightowlers, Mr Lorensz Senn and Mrs Lisa Norden. It is a pleasure to record our gratitude to A/Prof Robert Cowan for his exceptional commitment to the HEARing CRC and for his establishment of a very capable Executive Management team.

I commend this report to you and extend the Board’s gratitude and congratulations to the HEARing CRC Members, Executive Management team, researchers, staff and students for what has been a stimulating and productive year.

Richard Searby AO QC
Chairman

Mr Richard Searby AO QC
Chairman
The HEARing CRC has grown and consolidated over its second year of operations, leading to a number of significant developments in the organisation.

A major undertaking of the second year was the relocation of our headquarters and sound coding / engineering research facilities to new premises that we share with The University of Melbourne’s Department of Otolaryngology. These excellent facilities support our research, professional education and management activities, and will significantly contribute to increased productivity in the coming year.

This move also allowed us to relocate and refurbish laboratory space at the Royal Victorian Eye and Ear Hospital in East Melbourne and I am extremely grateful for the strong continuing support of this organisation. I would also like to extend my thanks to the University and once again to the Bionic Ear Institute for our previous, long-standing, accommodation.

Additional facilities have also been developed at Macquarie University, with the commissioning of the paediatric MEG imaging facility. This laboratory is already providing insights into the neural processing involved in Central Auditory Processing Disorders in children. Construction of Cochlear Ltd’s new headquarters building has also commenced at Macquarie University, and we were delighted to be advised of the successful funding application for the Macquarie University Hearing Hub. These important developments underline the increasing awareness of the significance of hearing loss and hearing research to the Australian community.

In May 2009, Project Leaders gathered for an inaugural Research Review, presenting recent achievements and ambitious plans for the future. The Review provided an ideal forum for researchers working across the HEARing CRC portfolio to develop and strengthen collaborative relationships. This inspiring showcase also provided the opportunity for our Board to view the scope of research activity, to discuss progress and challenges and to fine-tune Program areas. In addition, our Science Advisory Group will be set in motion early next year and will to contribute to next year’s Review as well as our external Third Year Review.

Considerable progress has been made in research projects during this year, resulting in a range of clinical applications of new technology and identification of novel intellectual property (IP). For example, biomedical studies have contributed to the development of a new cochlear implant electrode array for use by patients with significant levels of residual hearing; clinical trials in the CRC have provided data for regulatory approval in Australia and Europe. Speech coding studies aimed at enhancing binaural listening (for hearing aids and cochlear implants) have resulted in filing of two new international patents. By extending an existing screening project, we have already identified and validated a number of new models of presbycusic and acquired hearing loss. Studies using these models (as well as existing models) have recently revealed novel genes involved in hearing loss.

“Considerable progress has been made in research projects during this year, resulting in a range of clinical applications of new technology and identification of novel intellectual property”
Our Professional Education Program continues to successfully deliver high quality Cochlear Implant Training Workshops for healthcare professionals from around the world, as well as hosting a range of visiting specialists. In addition, the Biomedical Research Managers specialist certificate course developed by the HEARing CRC together with the University of Melbourne has also flourished during this reporting period. Over the past year, we have recruited a number of PhD students into our research projects. In the coming year, we plan to offer additional PhD research opportunities, as well as shorter duration projects for Master of Clinical Audiology students, enabling us to contribute to the training of the next generation of clinical researchers.

The HEARing CRC is dedicated to reducing the impact of hearing loss and last year announced the launch of Hearing Education and Research Network (HEARnet) to enhance the translation of research outcomes into clinical practice. Work continues on the development of this resource which we plan to fully implement later next year on the back of our recently-updated website.

From a corporate perspective, we have created HEARip as the Trustee for IP created by the HEARing CRC. This has enabled us to simplify the corporate structure and activities of both the HEARing CRC and HEARworks (in particular in regards to the management and commercialisation of IP developed by the previous CRC HEAR). In addition, it has enabled us to bring forward payment of commercial earnings from the IP generated through predecessor CRC HEAR, to increase our research effort over coming years. A major development during this period was the decision by the Australian Taxation Office to grant health-related charity status to the HEARing CRC.

During the year, I am delighted to have successfully expanded a highly skilled, capable and enthusiastic Executive Management team to work with me in driving the activity of the HEARing CRC. Following the resignation of Mr Lorensz Senn, the HEARing CRC has appointed Mrs Lisa Norden as our Chief Financial Officer and Company Secretary. We are pleased to also welcome Dr Jane Sewell as our Communications and Education Manager and Mr Trifon Chryssafis as our Commercial Operations Manager. In addition, research management has benefited from the appointment of our third part-time Research Project Coordinator, Mr Brendan Murray (based at The University of Melbourne).

We would like to thank all of those who have offered their ongoing support throughout this year and look forward to significant progress in addressing our twin challenges of more effective prevention and improved remediation of hearing loss. In particular, we owe special thanks and gratitude to the adults, children and their families who participate in our research studies. Without their help, we would be unable to achieve our goals.

Associate Professor Robert Cowan
Chief Executive Officer
Aims in perspective

Hearing loss affects one in six Australians, with a total financial cost estimated to be around $23 billion per annum\(^1\). Through research and its utilisation, the HEARing CRC aims to reduce the impact of hearing loss by:

- maximising lifelong hearing retention;
- reducing loss of productivity due to hearing loss;
- increasing uptake and use of hearing technology; and
- providing postgraduate and professional education and training.

The activity of the HEARing CRC contributes to Australia’s National Research Priorities of Promoting and Maintaining Good Health.

Highlights of the year

During 2008/09, the HEARing CRC has worked towards reducing the impact of hearing loss and promoting hearing health through integrated Research, Commercialisation and Education Programs. Highlights of this activity have included:

- Australian TGA approval and commercial release by Cochlear Ltd of Hybrid-L electrode array for adult patients with significant residual hearing;
- finalising negotiations regarding license of the trainable hearing aid technology to Siemens Hearing Instruments Pty Ltd;
- patenting of a new binaural signal processing scheme for cochlear implants and hearing aids;
- production of prototype Mark I Muffler hearing protection device for field testing;
- establishment and validation of models of presbycusis and acquired hearing loss;
- identification of novel hearing loss associated genes;
- preliminary testing of active occlusion reduction in hearing aids to improve own-voice sound quality;
- development of a functional model of the cochlear implant environment to test totally implantable devices;
- commissioning of the adult and paediatric magnetoencephalographic imaging laboratory at Macquarie University; and
- delivery of an increased number of Cochlear Implant Training Workshops to meet demand.

In addition, corporate and business highlights during this period have included:

- official launch by Senator the Hon. Kim Carr;
- relocation to new headquarters;
- finalisation of Board, Committee and corporate structure;
- recruitment of additional members to the Executive Management team;
- granting of health-related charity status by the Australian Tax Office; and
- accelerated availability of revenue from intellectual property to fund HEARing CRC research activity.

Corporate entities

The HEARing CRC is a multidisciplinary collaboration of five core and 21 supporting Members, each of which contributes specific expertise and infrastructure to our Research, Commercialisation and Education Programs.

Core Members

Support Members

HEARworks manages the intellectual property (IP) and commercial activity of the HEARing CRC. It was established by the predecessor CRC HEAR for these purposes and continues to act as Trustee and as the licensing / commercial agent of the CRC HEAR IP Trust (Trust 1).

HEARip is a new entity created to act as Trustee for the HEARing CRC IP (Trust 2), enabling a division of roles of IP Trustee and licensing / commercial agent.

Company detail

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEARING CRC LTD</td>
<td>incorporated in January 2009 as a company limited by guarantee, established to manage the activities of the HEARing CRC according to the Members Agreement</td>
</tr>
<tr>
<td>HEARWORKS, PTY. LTD.</td>
<td>incorporated in October 1999 as a proprietary company limited by shares, created by the Members, for the purposes of acting as Trustee for IP and undertaking commercialisation of research outcomes; HEARworks operates under a Management Deed and Trust Deed with the HEARing CRC Ltd and its Members</td>
</tr>
<tr>
<td>HEAR IP PTY LTD</td>
<td>incorporated in November 2008 as a trustee company, was created for the purposes of acting as Trustee for IP created by the HEARing CRC in the future</td>
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</table>
Governance structure

The HEARing CRC Board of Directors is accountable to the Commonwealth, Australian Securities and Investments Commission and the Members for all governance, oversight of management and corporate activities. It meets quarterly and is responsible for setting strategic goals and objectives, and overseeing performance (including the commercialisation activities managed through HEARworks).

The Board of Directors comprises of:
- an independent Chairman;
- two independent Directors (to be appointed in 2009/10);
- a nominated Director from each of the five core members; and
- the Chief Executive Officer.

Details of Board Members are provided over the page.

Four committees support the Board:
1: Finance and Audit (F&A) Committee - provides oversight of the financial operations and affairs of the Company, oversees the relationship with the external auditor, and the process of identification and management of business, commercial and financial risks. Meetings during reporting period: three.

2: Nominations and Appointments (N&A) Committee – makes recommendations on the appointment and remuneration of directors to the Boards of the HEARing CRC and HEARworks; assists in the appointment of a Chairman, or CEO, and in making recommendations on remuneration. Meetings during reporting period: two.

3: Science Advisory Group – will be established in 2009/10 to include key scientists from across the Members, together with independent scientists with expertise in the relevant disciplines of biomedicine, bioengineering and clinical practice. This group will assist with the annual Research Review, special reviews to be conducted under the CRC Program, as well as being available to advise the Board.

4: Support members Group - will be established in 2009/10 to provide a forum and opportunity for the Support Members to meet with and discuss progress directly with the Board and Executive Management team. It is intended that the Support Members’ Group will meet at least once per year.

Board and committee membership

<table>
<thead>
<tr>
<th>Name</th>
<th>HEARING CRC BOARD OF DIRECTORS</th>
<th>F&amp;A COMMITTEE</th>
<th>N&amp;A COMMITTEE</th>
<th>HEARWORKS BOARD OF DIRECTORS</th>
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<tr>
<td>Richard Searby</td>
<td>Chair</td>
<td>Ex officio</td>
<td>Ex officio</td>
<td>Chair</td>
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<td>AO, QC, MA (Oxon), Hon LL{Deakin}</td>
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<tr>
<td>Robert Cowan</td>
<td>CEO</td>
<td>In attendance</td>
<td>In attendance</td>
<td>Member</td>
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<tr>
<td>BSc (Hons), MBA, PhD(Melb), FAudSA (CCP)</td>
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<tr>
<td>Robin Evans</td>
<td>Nominee Director:</td>
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<tr>
<td>BE, PhD (Newcastle)</td>
<td>The University of Melbourne</td>
<td>Member</td>
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<tr>
<td>Kathryn Greiner*</td>
<td>Nominee Director:</td>
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<td>Chair</td>
<td>Member</td>
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<tr>
<td>AO, B Soc Work</td>
<td>Australian Hearing Services</td>
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<tr>
<td>Neville Mitchell</td>
<td>Nominee Director:</td>
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<tr>
<td>BComm, CA(SA), CA</td>
<td>Cochlear Ltd</td>
<td>Member</td>
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<tr>
<td>Jim Piper</td>
<td>Nominee Director:</td>
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<tr>
<td>BSc (Hons), PhD (Otago)</td>
<td>Macquarie University</td>
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<tr>
<td>Barry Roberts</td>
<td>Nominee Director:</td>
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<tr>
<td>FCPA, FCIS</td>
<td>Siemens Hearing Instruments Pty Ltd</td>
<td>Chair</td>
<td>Member</td>
<td>Member</td>
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<tr>
<td>Alternate: Mr Dominic Jenkins</td>
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* Appointed November 2008; Replacement for nominee Director, Ms Anthea Green, resigned September 2008.
Richard Searby  
AO, QC, MA (Oxon), Hon LLD (Deakin)  
Chairperson  
Independent  

Mr Searby was appointed as Chairman of the HEARing CRC Ltd in April 2007. He is a leading member of Australia’s legal profession, and has held a wide range of directorships of Australian and international corporations. He has advised the Australian Government on various occasions and has drafted amendments to Australian and Victorian legislation.

He was Chancellor of Deakin University from 1997 through 2005. Amongst a long list of corporate activities, he was a Director of News Corporation from 1979-1992 and Chairman from 1981-1991, and a Director of Rio Tinto Ltd from 1977-1997. He was awarded the Order of Australia in 2006 for his services to education, as a contributor to the programs of major cultural institutions, business and the law.

Mr Searby is an ex officio member of the Finance and Audit Committee and Nominations and Appointments Committee.

Robert Cowan  
BSc (Hons), MBA, PhD(Melb), FAudSA (CCP)  
Director and Chief Executive Officer  

A/Prof Cowan was appointed as the inaugural CEO of the HEARing CRC Ltd in January 2007 and Managing Director of HEARworks in 2001. He was CEO of the previous CRC HEAR. A/Prof Cowan is a Principal Research Fellow in The University of Melbourne, has published extensively in the fields of audiology, cochlear implants, sensory device and biomedical management, and holds a number of Australian and international technology patents and trademarks.

A/Prof Cowan has extensive experience in the management and commercialisation of research and served as Deputy Chair of the Cooperative Research Centres Association from 2002-2005. A/Prof Cowan was President of Audiology Australia from 1992-1996 and from 1997-2000, and remains a Federal Councillor. In 2004 he was selected as Australian Professional of the Year by Professions Australia, and his contributions to audiology have been recognised through award of Audiology Australia’s President’s Distinguished Service Award (2003) and the Denis Byrne Memorial Lecture award (2006) and the Libby Harrick’s Memorial Oration (2007).

Robin Evans  
BE, PhD (Newcastle)  
Nominee Director: The University of Melbourne  

Prof Evans is the Director of the Victoria Research Laboratory, National ICT Australia, and a Professor of Electrical Engineering at The University of Melbourne. Rob was a Professor of Computer Engineering at The University of Newcastle before becoming Head of Electrical Engineering and Research Leader for the Cooperative Research Centre for Sensor Signal and Information Processing at The University of Melbourne. He has worked extensively with industry throughout his career, has over 450 peer-reviewed publications and is a Fellow of the Australian Academy of Science, the Australian Academy of Technological Sciences and Engineering, the Institution of Electrical and Electronic Engineers USA, and the Institution of Engineers Australia.

Prof Evans is a member of the Finance and Audit Committee.
Kathryn Greiner

AO, B Soc Work
Nominee Director: Australian Hearing Services

Ms Kathryn Greiner was appointed as a Director of the HEARing CRC Ltd in November 2008 as a replacement for nominee Director, Ms Anthea Green, who resigned September 2008.

Kathryn has been Chair and Non-Executive Director of Australian Hearing Services since October 2006. Her professional career has involved administering early childhood services and mental health programs, both in Australia and the United States. She has extensive experience in the development of communities and their services. Ms Greiner has held many corporate and not-for-profit directorships, including the Salvation Army Sydney Shield Appeal, Save the Children Fund, LEK Consulting, International Council of the Asia Society and the Sydney Peace Prize Foundation.

Ms Greiner was appointed to the Nominations and Appointments Committee in November 2008.

Neville Mitchell

BComm, CA(SA), CA
Nominee Director: Cochlear Ltd

Mr Neville Mitchell was appointed as a Director of the HEARing CRC Ltd in April 2007. He has been Chief Financial Officer and Company Secretary of Cochlear Ltd since its listing in 1995 and was Cochlear Ltd’s Financial Controller since joining the company in 1990. Mr Mitchell was formerly a Senior Manager with KPMG in Johannesburg, South Africa.

Mr Mitchell was appointed to the Finance and Audit Committee in November 2008.

Jim Piper

BSc (Hons), PhD (Otago)
Nominee Director: Macquarie University

Prof Jim Piper was appointed as a Director of the Hearing CRC Ltd in April 2007. He is currently Deputy Vice Chancellor (Research) and Professor of Physics at Macquarie University. Prof Piper has extensive expertise and experience gained over 30 years of research in lasers, optics and photonics, and applications in micro fabrication. He has received an Honorary Doctorate from Heriot-Watt University in 2006, a Centenary Professorship from Carnegie Trust Universities of Scotland (2004), the Australian Optical Society Medal (1997), The Walter Boas Medal of the Australian Institute of Physics (1984) and the Pawsley Medal of the Australian Academy of Science (1982). Prof Piper has published widely in the field of dye laser design.

Barry Roberts

FCPA, FCIS
Nominee Director: Siemens Hearing Instruments Pty Ltd

Mr Barry Roberts was appointed as a Director of the HEARing CRC Ltd in April 2007. Mr Roberts has been Chairman of Siemens Hearing Instruments Pty Ltd since 1994, having first joined the Board in 1988. He joined Siemens Australia in 1960, and was Finance Director, CFO and Deputy CEO of the Australian and New Zealand Group between 1985 and 2002. Mr Roberts has over 40 years experience in budgeting, financial management and control, corporate governance, project management and administration. Mr Roberts is former Chairman of JAS-ANZ and Vice President of the Australian Electrical and Electronics Manufacturers Association.

Mr Roberts is Chair of the Finance and Audit Committee, and a member of the Nominations and Appointments Committee.

Alternate Director for Siemens Hearing Instruments Pty Ltd: Mr Dominic Jenkins.
Executive Management Team
(during reporting period)

Chief Executive Officer (CEO)
and Director:
A/Prof Robert Cowan

- **Responsibilities:** Providing scientific and academic leadership to the HEARing CRC; responsible to the Board of Directors for the implementation and conduct of Centre Research, Education, Commercialisation and management Programs.

Executive Assistant:
Ms Amanda Campbell

- **Background:** Amanda holds a tertiary qualification in Psychology and Market Research and has over eight years of experience in administration. Over the last five years, Amanda has focused on Personal / Executive assistant roles.

- **Responsibilities:** Direct support to the CEO and Board, and broad support to the activities of the Executive Management team.

Chief Financial Officer
and Company Secretary:
Mrs Lisa Norden

- **Background:** Appointed during 2008/09, Lisa has 20 years of financial experience in industry and not-for-profit organisations. She has spent the last seven years working with CRCs. Her qualifications include Certified Practicing Accountant, Chartered Secretaries Australia Corporate Governance Graduate Diploma and Australian Institute of Company Directors Course Diploma.

- **Responsibilities:** Coordinating financial, statutory and operational activities. Preparation of all reports as required by the Commonwealth, Board, CEO and Project Coordinators.

Commercial Operations Manager:
Mr Trifon Chryssafis

- **Background:** Appointed during 2008/09, Trifon brings over 17 years of commercial and risk management experience from the information technology and telecommunications industry. Having worked on numerous projects in Europe, South-East Asia and Australia, Trifon has a wealth of knowledge to assist the CRC in realising its commercialisation objectives.

- **Responsibilities:** IP management strategy and administration of IP and commercial registers.

Communication and Education Manager:
Dr Jane Sewell

- **Background:** Appointed during 2008/09, Jane started out as a research scientist, completing a PhD and post-doctoral role in the field of Molecular Oncology. She switched careers to become a Science Communicator and over the last five years has worked on the development of scientific and clinical multimedia resources and more recently as the Program Manager for the Victorian State Government, focused on the translation of clinical cancer research into practice.

- **Responsibilities:** External and internal communication strategies; managing the HEARing CRC Postgraduate and Professional Education Program.
Research Project Coordinators:

Responsible for coordinating activities and reporting of projects, the research coordinators help to ensure effective working relationships across projects, within Programs, and between research and education activities.

Dr Dominic Lou (Sydney):

Dominic is an educator, an experienced e-learning instructional designer, developer and project manager - having worked with a range of educational organisations. His research interest is in utilising technology to augment teaching, research and learning. Dominic is based at Macquarie University.

Ms Pam Jackson (Sydney):

Pam has tertiary qualifications in Business and Book Editing and Publishing, with many years administrative experience across a range of industries. Pam is based at Australian Hearing Services, National Acoustic Laboratories.

Mr Brendan Murray (Melbourne):

Appointed during 2008/09, Brendan is an Audiologist with nearly 15 years experience in the cochlear implant field. He has worked both in a clinical and business management capacity and recently joined The University of Melbourne.

Project Leaders

Project Leaders are responsible for the achievement of the aims and milestones of their HEARing CRC Project.

<table>
<thead>
<tr>
<th>PROJECT LEADER</th>
<th>MEMBER</th>
<th>PROJECT NUMBER</th>
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<tbody>
<tr>
<td>A/Prof Rob Briggs</td>
<td>The University of Melbourne</td>
<td>R3.2.2</td>
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<tr>
<td>Dr Rachel Burt</td>
<td>Walter and Eliza Hall Institute of Medical Research</td>
<td>R1.2.2</td>
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<td>Dr Sharon Cameron</td>
<td>Australian Hearing Services</td>
<td>R1.1.2</td>
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<tr>
<td>A/Prof Teresa Ching</td>
<td>Australian Hearing Services</td>
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<td>Dr Silvana Corkovic</td>
<td>The University of Melbourne</td>
<td>R3.2.1</td>
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<td>A/Prof Henrik Dahl</td>
<td>Murdoch Childrens Research Institute</td>
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<td>Dr Shani Dettman</td>
<td>The University of Melbourne</td>
<td>R4.2.2</td>
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<td>A/Prof Harvey Dillon</td>
<td>Australian Hearing Services</td>
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<td>Ms Dimity Dorman</td>
<td>Hear and Say Centre</td>
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<td>Mr Mark Harrison</td>
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<td>Prof Louise Hickson</td>
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<td>Prof Doug Hilton</td>
<td>Walter and Eliza Hall Institute of Medical Research</td>
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<td>A/Prof Greg Leigh</td>
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<td>Mr Teck Loi</td>
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<tr>
<td>Dr Pauline Nott</td>
<td>Advisory Council for Children with Impaired Hearing</td>
<td>R4.2.3</td>
</tr>
<tr>
<td>Prof Stephen D’Leary</td>
<td>The University of Melbourne</td>
<td>R2.5, R4.4.2</td>
</tr>
<tr>
<td>A/Prof Jim Patrick</td>
<td>Cochlear Ltd</td>
<td>R3.5</td>
</tr>
<tr>
<td>Ms Kerrie Plant</td>
<td>Cochlear Ltd</td>
<td>C1.1</td>
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<tr>
<td>Ms Emma Rushbrooke</td>
<td>Hear and Say Centre</td>
<td>R4.5.3</td>
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<td>A/Prof Peter Seligman</td>
<td>Cochlear Ltd</td>
<td>R2.0, R3.3.1</td>
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<tr>
<td>Dr Mridula Sharma</td>
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<td>R1.1.3</td>
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<td>Dr Michael Tykocinski</td>
<td>The University of Melbourne</td>
<td>R3.1</td>
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<tr>
<td>Dr Andrew Vandal</td>
<td>The University of Melbourne</td>
<td>R2.3.1</td>
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<tr>
<td>Dr Richard vanHoesel</td>
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<td>R2.2.2</td>
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<td>Dr Warwick Williams</td>
<td>Australian Hearing Services</td>
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<td>Dr Andy Zhang</td>
<td>The University of Melbourne</td>
<td>R3.3.2</td>
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<tr>
<td>Mr Dan Zhou</td>
<td>Australian Hearing Services</td>
<td>R4.3.3</td>
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</table>
The HEARing CRC’s research activity is arranged into four Programs, these are supported by the Clinical Trials and Product Development Commercialisation Program.

Each Program is made up of between three and seven Projects, full details of these can be found our website at www.hearingcrc.org. Our activity is focused on developing new knowledge and ensuring that this knowledge results in either technological or clinical benefits in prevention or remediation of hearing loss.

In May 2009, Project Leaders presented their latest research findings and future plans at the annual Research Review. The Review provided an ideal forum for researchers working across the HEARing CRC portfolio to gain a broader understanding of activity, as well as to developing closer collaborative relationships. This meeting also provided the opportunity for the Board of Directors to view the scope of research activity and to discuss progress and challenges with Project Leaders.

Despite delays experienced in year one, significant progress has been made during year two and the HEARing CRC has been successful in achieving key milestones. Many of the projects are still in the early data gathering phase, however numerous projects have resulted in technology for clinical applications and identification of new IP. Details of this work has either been used to file new patents or been widely communicated to the field through conference presentation and publication.

Research collaboration

Within the four Research and one Commercialisation Program, individual projects usually involve multiple Members, this collaborative approach maximises capacity, capability and infrastructure.

A number of HEARing CRC projects are made up of subprojects (for example R1.1 is composed of R1.1.1, R1.1.2 and R1.1.3) and others include geographically separated groups. Collaboration can be challenging to maintain in this segregated environment and the HEARing CRC uses its Research Project Coordinators to facilitate regular research meetings. Meetings are used to keep projects on track and to ensure that all of the project team members can offer intellectual input into ongoing activity.

International research collaboration

The HEARing CRC maintains a number of international research collaborations, these include:

- Medizinische Hochschule Hannover: Germany
- New York University Medical Centre: United States of America
- The Chinese University of Hong Kong: Hong Kong
- The University of Auckland: New Zealand
- The University of California (Irvine): United States of America
- The University of Manchester: United Kingdom
- The University of Toronto, Sick Children’s Hospital: Canada
- The University of Western Ontario: Canada
- The University of Wisconsin [Madison]: United States of America
- Washington University School of Medicine [St Louis]: United States of America
RESEARCH PROGRAM R1:
Biomolecular, Genetic and Physiological Solutions

Collaborating Members:
- Australian Hearing Services
- Bionic Ear Institute
- Macquarie University
- Murdoch Childrens Research Institute
- MuriGen Pty Ltd
- Neuromonics Inc.
- The University of Melbourne
- The University of Queensland
- Walter and Eliza Hall Institute of Medical Research

Objectives:
The Biomolecular, Genetic and Physiological Solutions Program combines two core elements:

1: design and development of genetic and biomolecular diagnostics, and pharmacological solutions, that address age related (presbycusis) and acquired hearing loss; and

2: investigation of central auditory processing disorders (CAPD) and tinnitus using magnetoencephalographic (MEG) imaging.

The first area is designed to lead to better understanding of presbycusis and acquired hearing loss. Initial activity is focused on identification of susceptible individuals or those most ‘at risk’ of developing these types of hearing loss. This work will potentially lead to a later phase that will design a commercial diagnostic tool to identify individuals most at risk. Related research in this area is aimed at identifying molecules that may be targeted pharmacologically for the prevention or treatment of hearing loss.

The second area of Program R1 primarily focuses on using MEG imaging to record nervous activity in the brain resulting from acoustic stimulus. The MEG will be used to compare transmission and processing of acoustic information in the central auditory processing pathways of individuals with normal hearing and those with different types of hearing loss. This information will be used to identify new approaches to prevention, diagnosis and management of CAPD and tinnitus in children and adults. It may also provide new understanding of how to best code temporal aspects of speech. Associated projects use different approaches to also consider improved means of diagnosing and managing CAPD to reduce its lifelong effects.

Progress:
During 2008/09, work in this first area continued to focus on the establishment of models of presbycusis and acquired hearing loss. A number of novel models have been identified through a large scale ENU screening process and literature searches – screening and validation will continue for a significant period yet.

The new models have already revealed mutations in both novel and known deafness genes. The genes identified through this process will be the focus of future research in these projects, to better understand the inheritance patterns and risk factors associated with hearing loss. In addition, physiological investigations are also being undertaken to better understand the in vivo processes and pathways involved. These projects are progressing well, although there have been some delays with the recruitment of individuals with hearing loss that will be used to confirm the relevance of genetic changes identified in model systems, within a relevant human cohort.

The adult MEG lab was fully established during 2008/09 at Macquarie University, and the world’s only paediatric MEG was commissioned. In addition, through HEARing CRC work at the National Acoustic Laboratories, an auditory testing setup was developed for use in this MEG facility. All necessary ethics approvals were granted for the research work involving this facility. Projects are broadly on track, however the period for subject recruitment for the tinnitus project has been extended to enable appropriate numbers to be enrolled.
RESEARCH PROGRAM R2: Intelligent Sound Processing

Collaborating Members:
- Australian Hearing Services
- Bionic Ear Institute
- Cochlear Ltd
- Macquarie University
- Royal Victorian Eye and Ear Hospital
- Siemens Hearing Instruments Pty Ltd
- Sydney Cochlear Implant Clinic
- The University of Melbourne

Objectives:
The Intelligent Sound Processing Program unites sound processing and signal coding with electronics and communication engineering to improve the performance of hearing aids, cochlear implants and intelligent hearing protection. The research projects in this area aim to increase sound intelligibility in background noise, the capacity to hear with both ears (binaural hearing) and to enhance perception of tonal languages for users.

This Program also addresses the dual input of acoustic sound (‘normal hearing’) and electrical sound (for example from cochlear implants) to improve performance for individuals who receive both. Successful realisation of this Program will provide improved hearing protection and enhanced communication for users of hearing aids, cochlear implants and hearing protectors to help reduce the productivity losses associated with hearing loss.

Progress:
Notable progress has been made in the area of binaural sound processing with a novel signal processing scheme submitted for patenting. This scheme improves speech perception and intelligibility in real acoustic environments while also maintaining localisation cues that are important for hearing in background noise or locating sounds. This processing scheme is being investigated for both hearing aid and cochlear implant systems.

Early experiments have also been completed comparing perception of Mandarin tone in normal hearing and hearing impaired individuals using different pitch processing strategies and trialling novel speech processing simulator software. The outcomes of this work have validated the new software being used and have implications for improving future market share of hearing devices.
RESEARCH PROGRAM R3:
Integrated Bioengineering

Collaborating Members:

- Acoustics Pty Ltd
- Australian Hearing Services
- Bionic Ear Institute
- Cochlear Ltd
- Hybrid Electronics Pty Ltd
- Royal Victorian Eye and Ear Hospital
- Siemens Hearing Instruments Pty Ltd
- Sydney Cochlear Implant Clinic
- The University of Melbourne
- The University of Sydney
- University of Wollongong

Objectives:

The Integrated Bioengineering Program investigates novel surgical techniques, bioengineering and biomaterials that offer opportunities to develop new technologies that will enhance function of cochlear implants, hearing aids and hearing protection.

This Program is also focused on new approaches and capabilities for improved Bone Anchored Hearing Aids and middle ear implants. The overarching aim of the Program is to enhance function and communication, as well as enable active hearing protection.

Progress:

A main focus of activity has been aimed at new cochlear implant electrode designs. Studies have progressed well with a number of new designs passing through temporal bone and insertion biosafety studies, moving on to first-time in human, and subsequent clinical trials through the HEARing CRC. This has resulted in Australian TGA and European regulatory approval and commercial release of the Hybrid-L electrode array by Cochlear Ltd for use in patients with more residual hearing. In addition, the HEARing CRC is collaborating internationally on the development of a new implant electrode array designed to maximise hearing preservation. In association with this are novel approaches to surgical insertion, and new designs of receiver-stimulator packages that will reduce surgical drilling.

Research into fully implantable hearing enhancement has led to the development of a functional model of the implant environment, including internal microphone parameters. This innovation will facilitate future research in this developing field. Further work has modelled existing hearing aid microphones, providing data that will enable noise performance to be predicted for any proposed microphone in the implantable (or indeed any other) environment.

The design concept for an inner ear sensor has recently been completed and a number of sensor models have been constructed for surgical insertion studies with temporal bones. This has necessitated development of novel fabrication methods. Implantation of miniature acoustic sensors in the middle or inner ear have the benefit of picking up vibrations of the ossicular chain or the pressure waves in the cochlea, utilising the natural filtering function of the outer ear and the acoustic amplification of the middle ear, which are normal in a majority of the cochlear implant users, but are bypassed in current cochlear implant systems.

Improvements in comfort, safety and intelligibility of hearing devices and protection have been addressed through the Speech Referenced Limiting (SRL) scheme which is now patented internationally. This scheme has been implemented in a Windows Vista version within the personal computer environment to protect listeners of computer delivered speech from uncontrolled speech sounds. In addition, the Mark I Muffler active noise control earmuff design has moved into the prototyping stage and initial field testing will be undertaken early in 2009/10.
RESEARCH PROGRAM R4: Clinical Tools, Services and Techniques

Collaborating Members:
- Acoustics Pty Ltd
- Advisory Council for Children with impaired Hearing
- Attune Hearing Pty Ltd
- Audiology Australia
- Australian Hearing Services
- Cochlear Ltd
- Hear and Say Centre
- Macquarie University
- Royal Institute for Deaf and Blind Children
- Royal Victorian Eye and Ear Hospital
- Siemens Hearing Instruments Pty Ltd
- Sydney Cochlear Implant Clinic
- The Shepherd Centre
- The University of Melbourne
- The University of Sydney
- Victorian Deaf Society

Objectives:
The Clinical Tools, Services and Techniques Program is aimed at improving and individualising hearing lifecycle management to advance outcomes for people with hearing loss, as well as providing greater clinical efficiencies.

Research is focused on the design and development of new clinical applications, improved surgical processes tools for implanting or fitting new devices and novel approaches to device-training. In addition, work will be undertaken to address the need for more efficient professional training of audiologists, surgeons and other professionals, and to better understand the barriers to device use (as applied to hearing protection, hearing aids, or referral/use of cochlear implants) with the aim of maximising uptake and usage.

Progress:
Improved hearing aid fitting will be an important development for industry partners, to enable rapid expansion of markets, particularly when coupled with research identifying barriers to device uptake and use. A group of projects within this Program are making significant advances towards new approaches to device fitting, for example through:

- realistic reproduction of three-dimensional, real world, acoustic environments for audiological assessment (as well as for research device testing);
- remote fitting, potentially through internet-based applications; and
- trainable hearing aids that are 'taught' by the user to adjust according to personal preferences.

Similar challenges exist for cochlear implant users and some of this technology is relevant to both types of hearing device. Remote mapping of cochlear implants has recently been achieved through a project based at The University of Queensland. This will be tested over larger distances with wider age groups during 2009/10 and will ultimately be implemented in regional and rural areas. Projects focusing on such exploitation of the internet will ensure that the HEARing CRC is well placed to benefit from the worldwide trend towards increased internet activity, for example the growing trend towards purchase of hearing devices through this medium.

Better understanding of behaviours associated with hearing loss can also be used to improve access to and uptake of hearing devices. Investigations into levels of noise exposure and attitudes towards noise exposure have been extended with additional funding from the Commonwealth Office of Hearing Services;

continued on page 19
Early findings from this Project will be reported early in 2009/10. In a differently focused, longitudinal study based in the Blue Mountains, hearing, vision and general health information has been recorded since 1992/3 for more than 3,500 individuals over the age of 50. The 15 year hearing data set has recently been completed for analysis and will provide further insight into risk factors associated with hearing loss. Finally, Telescreen is a freely available hearing test service that is available over a telephone line, this has been developed by the National Acoustic Laboratories in conjunction with Australian Hearing Services. Although Telescreen is being well used by the community, one of the HEARing CRC Projects has identified that only a limited number of individuals follow up with a healthcare professional when a hearing loss is identified; this has implications for screening processes that are now being investigated.

Clinically focused research has shown that directional microphone use is valuable for children with hearing loss from six months onwards. Australian Hearing Services have already amended their practice guidelines in light of this evidence, where previously they were only available for children from the age of five upwards. As part of a large, longitudinal study of children with hearing impairments (the LOCHI study, involving 475 individuals, currently between the ages of three and seven) – early results in speech, language, psychosocial and educational outcomes all indicate the importance of cochlear implantation for children less than 12 months of age. This supports existing data and has clear implications for guidelines in the future.
COMMERCIALISATION PROGRAM C1: Clinical trials and product development

Collaborating Members:
- Attune Hearing Ltd Pty
- Australian Hearing Services
- Cochlear Ltd
- Royal Victorian Eye and Ear Hospital
- Siemens Hearing Instruments Pty Ltd
- Sydney Cochlear Implant Clinic
- The University of Melbourne
- The University of Sydney

Objectives:
The Clinical Trials and Product Development Program enables the efficacy of novel HEARing CRC approaches and products to be tested through single or multi-centre feasibility and clinical trials as the first step in the commercialisation process.

Progress:
A number of new cochlear implant sound processors, sound coding strategies, electrode arrays and surgical procedures have been tested on small groups of subjects during 2008/09, these include:
- surgical studies to establish the most appropriate technique for implantation of Cochlear Ltd’s latest generation CI500 Series Nucleus cochlear implants;
- studies of cochlear implant patients with significant levels of residual hearing that have demonstrated improved localisation ability, speech perception in noise, and musical and sound quality ratings. Outcomes have resulted in Australian TGA and European regulatory approval for commercial release of Cochlear Ltd’s Hybrid-L electrode array in patients with more residual hearing, widening future implant candidature;
- in collaboration with a number of international research groups, a new cochlear implant Modiolar Research Array has been implanted in seven subjects. This array has been designed to facilitate improved electrode array positioning in the cochlear to improve implant performance; and
- development of receiver-stimulator package that reduces surgical drilling.

Hearing aid studies were commenced to investigate active occlusion reduction to improve own-voice sound quality, an approach aimed at improving wearability of hearing devices.

A related set of projects addressed the commercialisation of HEARlab hardware and software. This instrument can be used to perform aided cortical assessments and cortical threshold evaluation, it is under development with Frye Electronics Inc. and is in review at the FDA for approval to market in the USA.
IP management and commercialisation

All HEARing CRC research projects include an identified commercialisation / utilisation strategy that is updated annually.

This anticipates commercialisation through industry Members directly involved as project participants, or through uptake and use championed by clinical and professional Members.

Revenue from commercialisation is distributed to Members with project beneficial interests and a proportion is reinvested directly in HEARing CRC research activities. During 2008/09, $3.5 million net revenue from predecessor CRC HEAR IP was distributed in this way.

Commercial IP

HEARworks manages the IP and commercial activity of the HEARing CRC. To ensure appropriate protection and to maximise commercialisation of research outcomes, HEARworks works closely with its industry Members. Wherever possible, licensing involves Australian companies or small to medium sized enterprises, however, this is balanced with the need for worldwide marketing of technology.

The commercialisation process begins with Project Leaders who prepare and submit invention disclosure information quarterly. The commercial potential of each new invention is assessed and an appropriate strategy devised, often with input from patent firms and legal counsel.

Under the terms of the HEARing CRC Member’s Agreement, a number of Members have been assigned first rights in specific fields of interest, for example Cochlear Ltd for new cochlear implant technology and Siemens Hearing Instruments Pty Ltd for technological innovations in the field of hearing aids. This mechanism ensures that clear lines of commercial interest are acknowledged as soon as novel IP is identified. It also facilitates the development of commercial products with enhanced performance, new function, or improved process for manufacture for our industry Members.

HEARing CRC innovations are also distributed through direct sales and licensing by HEARworks, this may be in partnership with Members or through the involvement of third parties.

Non-commercial IP

Some of the HEARing CRC IP is optimally managed through transfer of knowledge and implementation of findings rather than via commercial routes, for example:

- promoting practical improvements to clinical procedures that provide savings in terms of clinical time and cost efficiencies, via:
  - national and international conferences
  - peer-reviewed publications
  - internet based communications
  - Australian Hearing’s clinical services
  - Audiology Australia’s Continuing Professional Development Program
- providing professional training to surgeons and clinicians through our Cochlear Implant Training Workshop and Visiting Implant Specialist to Australia Program (this has the additional benefit of facilitating the development and expansion of markets for hearing technology and clinical practice).
Patents
Two new patents were added to the portfolio during the reporting period, taking the total to six in Australia and 23 overseas.

Patents taken out by HEARworks and HEARip during 2008/09

<table>
<thead>
<tr>
<th>APPLICATION NUMBER</th>
<th>TITLE</th>
<th>APPLICANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009900365</td>
<td>Advanced envelope encoded tone sound processor and system</td>
<td>HEARworks</td>
</tr>
<tr>
<td>2009903730</td>
<td>System and method for a spatially tuneable direction of arrival estimator</td>
<td>HEARip</td>
</tr>
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</table>

Licenses
Whilst no new license arrangements were concluded in the 2008/09 year, HEARworks is negotiating several licenses which are expected to finalise and be signed in the coming months.

Existing licensing activities of HEARworks during 2008/09

<table>
<thead>
<tr>
<th>TECHNOLOGY</th>
<th>LICENSEE</th>
<th>VALUE</th>
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</thead>
<tbody>
<tr>
<td>Sound Protection</td>
<td>Polaris</td>
<td>$246,000</td>
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</table>

Spin-off companies
Established in 2001, Microphones Pty Ltd holds IP developed by the previous CRC HEAR. HEARworks holds 100% of the equity of Microphones. Microphones Pty Ltd has not actively traded since 2007/08 and it is now in the process of being wound up; IP has been assigned to HEARworks.
The HEARing CRC’s Postgraduate and Professional Education Programs aim to deliver industry-ready graduates and increased clinical capacity for Australia’s hearing healthcare industry.

The HEARing CRC is also involved in some public education activities, with a strong presence at the Australian Science Festival’s Amazing World of Science in May 2009 and also an involvement in National Science Week and National Hearing Week.

Postgraduate education

The Postgraduate Education Program aims to enhance the postgraduate learning experience in order to deliver industry-ready graduates through:

- active involvement of supervisors and lecturers from non-university CRC partners; and
- introducing students to non-traditional subject areas such as IP and project management.

This approach endeavours to improve our graduate researchers’ awareness of the needs of industry in applied research, thereby enhancing employment opportunities. In addition, the HEARing CRC is involved in various industry based activities that promote the benefits of graduate intake.

Collaborating Members:

- Australian Hearing Services
- Macquarie University
- The University of Melbourne
- The University of Queensland
- The University of Sydney
- University of Wollongong

During the 2008/09 reporting period there were 12 PhD students and two MPhil/MClinAud students in total. Of these, three PhD students and one MClinAud student was newly recruited.

During 2008/09, two PhD students graduated. All HEARing CRC students and their status are detailed in the table on page 24.

Brett Swanson graduating from the University of Melbourne
### Postgraduate Students Status

#### PHD

<table>
<thead>
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<th>PROJECT NUMBER</th>
<th>NAME</th>
<th>UNIVERSITY</th>
<th>F/P TIME</th>
<th>FUNDING</th>
<th>SUPERVISOR(S)</th>
<th>STATUS</th>
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<tr>
<td>2.3.1</td>
<td>Isabelle Boisvert</td>
<td>Macquarie</td>
<td>Full</td>
<td>Macquarie Research Excellence Scheme and HEARing CRC</td>
<td>C McMahon, B Lyxell</td>
<td>In progress (new 08/09)</td>
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<tr>
<td>2.3.3</td>
<td>Wang Shuo</td>
<td>Macquarie</td>
<td>Full</td>
<td>Macquarie University</td>
<td>R Mannell</td>
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<td>4.2.2</td>
<td>Rebecca Summons</td>
<td>Macquarie</td>
<td>Full</td>
<td>Macquarie University</td>
<td>C McMahon, J McGregor</td>
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<td>4.2.2</td>
<td>Jamie Leigh</td>
<td>Melbourne</td>
<td>Part</td>
<td>The University of Melbourne</td>
<td>R Dowell, S Dettman</td>
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<td>4.2.2</td>
<td>Coleen Holt</td>
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<td>S Dettman, J Fletcher, R Dowell</td>
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<tr>
<td>4.4.2</td>
<td>Christopher Wong</td>
<td>Sydney</td>
<td>Full</td>
<td>Garnett Pase and Rodney Williams Memorial Foundations and HEARing CRC</td>
<td>S O’Leary, I Curthoys, A Jones</td>
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<tr>
<td>4.6.4</td>
<td>Karen Bate</td>
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<td>Part</td>
<td>Macquarie University</td>
<td>C McMahon</td>
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<td>4.6.4</td>
<td>Kirsty Gardiner-Berry</td>
<td>Sydney</td>
<td>Full</td>
<td>National Acoustic Laboratories</td>
<td>H Dillon, S Purdy, S Carlile</td>
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<tr>
<td>E6</td>
<td>Jorge Meija</td>
<td>Sydney</td>
<td>Part</td>
<td>CRC HEAR staff support (National Acoustic Laboratories)</td>
<td>S Carlile, H Dillon</td>
<td>In progress</td>
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<tr>
<td>E9</td>
<td>George Raiscevich</td>
<td>Swinburne</td>
<td>Part</td>
<td>CRC HEAR staff support (National Acoustic Laboratories)</td>
<td>P Seligman, A Klein, R Cowan</td>
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<tr>
<td>E11</td>
<td>Brett Swanston</td>
<td>Melbourne</td>
<td>Part</td>
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<td>P Blamey, H McDermott, J Patrick</td>
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<tr>
<td>E13</td>
<td>Andy Zhang</td>
<td>Melbourne</td>
<td>Part</td>
<td>CRC HEAR staff support</td>
<td>P Seligman, A Klein, R Cowan</td>
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#### MPHIL

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<th>SUPERVISOR(S)</th>
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<td>4.5.3</td>
<td>Emma Rushbrooke</td>
<td>Queensland</td>
<td>Part</td>
<td>Hear and Say Centre</td>
<td>L Hickson, B Henry</td>
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#### MCLINAUD

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<th>F/P TIME</th>
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<td>1.1.3</td>
<td>Pia Gyldenkaerne</td>
<td>Macquarie</td>
<td>Full</td>
<td>Macquarie University</td>
<td>M Sharma</td>
<td>In progress (new 08/09)</td>
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</table>
Professional education

The HEARing CRC Professional Education Program delivers innovative professional programs and courses for hearing healthcare professionals from Australia, Asia Pacific and world-wide.

These activities help to ensure uptake of new, more efficient technology and clinical practices in the fields of cochlear implants and hearing aids.

Collaborating Members:

- Audiology Australia
- Bionic Ear Institute
- Cochlear Ltd
- The Royal Victoria Eye and Ear Hospital
- The University of Melbourne

Professional Education activities include:

International Cochlear Implant Training Workshops:

The HEARing CRC continues to conduct four-day Cochlear Implant Training Workshops for surgeons and clinicians from Australia and Asia Pacific regions. The Program is an effective means of helping to develop the necessary infrastructure in Asia Pacific for better uptake of cochlear implant and hearing aid technology.

Four Workshops were held during the reporting period:

<table>
<thead>
<tr>
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<tr>
<td><strong>Paediatric Workshop:</strong></td>
<td><strong>General Workshop:</strong></td>
<td><strong>General Workshop:</strong></td>
<td><strong>General Workshop:</strong></td>
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<tr>
<td>≥ 31 attendees</td>
<td>≥ 38 attendees</td>
<td>(Surgeons only)</td>
<td>≥ 28 attendees</td>
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<tr>
<td>≥ 8 countries</td>
<td>≥ 6 attendees</td>
<td>≥ 12 attendees</td>
<td>≥ 5 countries</td>
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</tbody>
</table>

Workshop descriptions are detailed on page 26.
General Cochlear Implant Training Workshop:
Cochlear Implant Training Workshops are for surgeons, clinicians and other healthcare professionals working with adults; attendees include:

- researchers and professionals seeking to gain a generalised knowledge of cochlear implant technology and management;
- surgeons or clinicians embarking on new cochlear implant programs with adult patients; and
- experienced clinicians wishing to review procedures and management techniques / update their knowledge of hardware and speech processing.

The Workshop is conducted through a mix of formats including lectures, small group discussions and tutorials. Individual sessions cover history of the development and underpinning research, candidature, cochlear implant system hardware and function, programming, medical/surgical considerations, habilitation, outcomes evaluation and new directions in research. The Workshop includes programming tutorials providing direct experience with implant users. A series of comprehensive audiovisual presentations (including interactive video link to a live cochlear implant surgery) and an extensive reference manual are provided.

The optional temporal bone/surgical Workshop for surgeons runs in concurrent sessions over days two and three. This Program includes a temporal bone workshop, plus tutorial-format discussion of surgical technique and medical management issues with experienced surgeons.

Paediatric Cochlear Implant Training Workshop:
Paediatric Cochlear Implant Training Workshops are for experienced clinicians and educators actively involved in the management of implanted children, or those wishing to embark on cochlear implant programs with children.

The Workshop covers all specialised issues relevant to cochlear implant management in children including: paediatric candidature, preoperative hearing aid optimisation, device issues in children including use of RF units, paediatric mapping techniques, medical/surgical issues in children, techniques in paediatric habilitation, evaluation techniques for assessing speech perception, speech production and language in children with a wide range of developmental ages and linguistic skill. In addition, special sessions address educational management for different age groups of children.

Sessions provide opportunities for direct observation of clinical practice, comprehensive audio-visual instruction, and small workgroup tutorials.

“Surgical option was very good...live surgery was wonderful. I've learnt so much!”

“Excellent presentations and invaluable information”

“The presenters were all very experienced and had good knowledge of the subject, all gave good presentations”

Feedback from attendees of the April 2009 Cochlear Implant Training Workshop
Specialist Certificate in Clinical Research:

With A/Prof Robert Cowan as the coordinator, the HEARing CRC has continued to support The University of Melbourne’s Specialist Certificate in Clinical Research (Biomedical Research Management), offered through Melbourne Consulting and Custom Programs.

The course is run once a year, in two four-day blocks, open to all attendees. It is aimed at developing the skills required to be an effective biomedical research manager – covering areas that research managers must be conversant with, and make decisions about, in order to develop sound biomedical research project plans and budgets. The course also tackles proactive management and communication of projects where uncertainty is ‘the norm’. Course assessment is built around demonstrating the ability to apply skills learned to a real work based project.

In late 2008, 12 people attended this course and feedback was very positive.

“I wish I had done this earlier in my career! It has given me the theory to support my research management experience and a greater appreciation of research management as a profession that is critical to the research value chain. This course will give immediate return on investment as the learnings can be applied directly in the workplace. Every research manager should do this course.”

Anne O’Neill
Associate Director, Medical Research
NSW Office for Science and Medical Research

Audiology Australia – Continuing Professional Development (CPD)

Various HEARing CRC Members and individual Project Leaders contribute to Audiology Australia’s CPD events and are involved in activities that are endorsed through their established CPD Program.

Visiting Implant Specialists to Australia (VISTA)

The VISTA Program is run in conjunction with Cochlear Ltd and provides the opportunity for Ear, Nose and Throat (ENT) surgeons from around the world to be presented with updated information regarding research and development in the field of cochlear implants. The Program also encourages the exchange of ideas and strategies during a week long tour in Sydney and Melbourne.

In late 2008, 32 ENT surgeons attended this program and feedback was very positive.

In addition, the HEARing CRC and The University of Melbourne are also involved in Cochlear based:

- presentation on surgical themes; and
- supervising cochlear implant surgeries in India and China.

These activities, in association with the Cochlear Implant Training Workshops, assist with the development of Cochlear Ltd’s market in both Australia and the Asia-Pacific region, helping to maintain and expand their world position.

Sponsorship

The HEARing CRC provided sponsorship for the:

- Third International Electromaterials Science Symposium, titled “Advanced Materials for Energy Storage and Generation” in Wollongong, Australia; and
- Inaugural Conference on Medical Bionics in Lorne, Australia.

Investment in such events supports knowledge transfer in the field as well as providing valuable opportunity to networking, building collaborations and career development.
Communication is fundamental to the achievement of HEARing CRC outcomes. It is essential that the knowledge we generate through research is transferred to other researchers, clinicians, consumers and the public.

Through both our communication and our education activities, the HEARing CRC has developed and nurtured links with surgeons, clinicians and other healthcare professionals in the fields of cochlear implants and hearing aids. Extending these links to our collaborative research relationships ensures meaningful exchange of information. The HEARing CRC has more recently moved into the field of hearing protection and is fostering appropriate links with industry, government, consumers and the public.

**Communicating our research**

Dissemination of information relating to our research findings and other activities is a vital element of the HEARing CRC communication strategy, this occurs primarily through:

- conference presentations and invited keynote addresses at Australian and international scientific meetings;
- publication of peer-reviewed journal articles and conference proceedings;
- publication in industry newsletters and magazines;
- local, national and international media coverage and comment;
- sponsorship of pertinent conferences;
- application for prominent awards/prizes; and
- involvement in public activities, such as, National Hearing Week and Science Week.

The HEARing CRC has been active in these areas during the reporting period, a full listing is provided on pages 32 to 35 of this report. It includes 23 peer-reviewed articles, 51 papers and posters presented at academic and industry conferences and nine releases to the public through industry and Member communications.

Communication with, and knowledge transfer to, discrete stakeholder groups is made possible via our close working relationships with Members, for example:

- results of clinical studies in relation to cochlear implants are distributed to clinical specialists, product managers and marketing staff within Cochlear Ltd. These Technical Reports are produced for training purposes and to address product related issues; and

- outcomes of hearing aid and clinical activities are widely disseminated through Australian Hearing’s clinical services and through Audiology Australia (the professional association of audiologists). These communications reach clinicians working with end-users of hearing rehabilitation technology and services.

52 Technical Reports, research reports and special papers discussing HEARing CRC findings were produced by Members during this period.

**HEARnet**

The HEARing CRC launched the HEARing Education and Research Network (HEARnet) during the 2007/08 year. The new HEARing CRC website will provide the platform for this resource to be established in the coming year.

A small working group is currently being assembled to ensure the appropriate realisation of this resource.

HEARnet will aspire to:

- improve the knowledge of the community to the risks of noise induced hearing loss and introduce the concept of ‘daily noise dose’ as a major preventive healthcare measure;

- enhance the translation of research outcomes into clinical practice for the benefit of adults, children and their families managing hearing loss; and

- provide a new mechanism for the HEARing CRC to develop linkages.
2008/09 activities of note

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The HEARing CRC sponsored the Sir Mark Oliphant Inaugural Conference of Medical Bionics to support a specialist conference in Australia and also to raise awareness of the HEARing CRC and its activity within this community.</td>
<td>The University of Wollongong, Intelligent Polymer Research Institute hosted the 3rd International Electromaterials Science Symposium, titled “Advanced Materials for Energy Storage and Generation”. The HEARing CRC contributed to the success of the symposium by sponsoring key note speaker, A/Prof Mario Romero-Ortega (The University of Texas at Arlington, USA) who described his most recent work on the use of growth factors to guide sensory nerves.</td>
<td>The HEARing CRC Executive Management team and sound coding / engineering research activity relocated from East Melbourne to The University of Melbourne’s new Audiology, Hearing and Speech Sciences building at 550 Swanston Street, Carlton.</td>
</tr>
</tbody>
</table>

MAY 2009

The HEARing CRC was officially launched by Senator the Hon. Kim Carr, Minister for Innovation, Industry, Science and Research on 21st May. The launch was held in conjunction with the official opening of The University of Melbourne’s new Audiology, Hearing and Speech Sciences building, the new home of the Department of Otolaryngology.

The Senator was joined by HEARing CRC Chairman Mr Richard Searby, and Prof Sue Elliott, Pro Vice-Chancellor (Teaching, Learning and Equity) from The University of Melbourne. Prof Graeme Clark, pioneer of the cochlear implant, inaugural Chair of the Department of Otolaryngology and the Director of the original CRC for Cochlear Implant, Speech and Hearing Research was also invited to reflect on developments.

Senator the Hon. Kim Carr, A/Prof Robert Cowan and Prof Richard Dowell

Naomi Baulch with implant twins, Ben and Lochie meeting Prof Graeme Clark

continued on page 30
2008/09 activities of note (cont)

MAY 2009 (cont)

The HEARing CRC stand at the Australian Science Festival’s four-day Amazing World of Science proved very popular with both school groups and members of the public alike. The stand was visited by some of the 12,000 attendees and featured hearing protectors for testing, a real time, interactive animation of how a cochlear implant works as well as access to Australian Hearing Service’s telephone based hearing test.

Project Leaders attended the HEARing CRC two-day Research Review to present recent achievements and future plans, they also gathered for an informal conference dinner.

JUNE 2009

The HEARing CRC was delighted to contribute to the Cooperative Research Centre Program’s legacy newsletter, “Success through Innovation”, published to celebrate 18 years. Predecessors to the current HEARing CRC and also the Vision CRC were funded in 1991, and both CEOs wrote about their ambitious programs, then and now, detailing their contribution to academic, clinical and commercial breakthroughs.

Prime Minister Kevin Rudd announced that the Commonwealth Government would seek a commitment from States and Territories to deliver newborn screening for all Australian babies from the 1st January 2011. In response to this announcement, A/Prof Gary Rance was invited to appear on Networks Ten’s 9am with David and Kim. A/Prof Rance was interviewed with the first person to be diagnosed with a hearing loss using Auditory Steady State Response testing. At that time the subject was just six weeks old and the new approach was being pioneered by Gary and colleagues at The University of Melbourne.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACN</td>
<td>Australian Company Number</td>
</tr>
<tr>
<td>AO</td>
<td>Officer of the Order of Australia</td>
</tr>
<tr>
<td>ASX</td>
<td>Australian Securities Exchange</td>
</tr>
<tr>
<td>CAPD</td>
<td>Central Auditory Processing Disorders</td>
</tr>
<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
</tr>
<tr>
<td>CFO</td>
<td>Chief Financial Officer</td>
</tr>
<tr>
<td>CPD</td>
<td>Continuing Professional Development</td>
</tr>
<tr>
<td>CRC</td>
<td>Cooperative Research Centre</td>
</tr>
<tr>
<td>CT</td>
<td>Computed Tomography</td>
</tr>
<tr>
<td>DEST</td>
<td>Department of Education, Science and Training</td>
</tr>
<tr>
<td>Di-EL</td>
<td>Diary of Early Learning</td>
</tr>
<tr>
<td>ENT</td>
<td>Ear, Nose and Throat</td>
</tr>
<tr>
<td>ENU</td>
<td>N-ethyl-N-nitrosourea</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>F&amp;A Committee</td>
<td>Finance and Audit Committee</td>
</tr>
<tr>
<td>FAL</td>
<td>Francis Abourizk Lightowlers</td>
</tr>
<tr>
<td>FDA</td>
<td>Food and Drug Administration (USA)</td>
</tr>
<tr>
<td>HEARnet</td>
<td>Hearing Education and Research Network</td>
</tr>
<tr>
<td>IP</td>
<td>Intellectual Property</td>
</tr>
<tr>
<td>LOCHI</td>
<td>Longitudinal Outcomes of Children with Hearing Impairment</td>
</tr>
<tr>
<td>MEG</td>
<td>Magnetoencephalographic imager</td>
</tr>
<tr>
<td>MClinAud</td>
<td>Masters of Clinical Audiology</td>
</tr>
<tr>
<td>MPhil</td>
<td>Masters of Philosophy</td>
</tr>
<tr>
<td>MRA</td>
<td>Modiolar Research Array</td>
</tr>
<tr>
<td>N&amp;A Committee</td>
<td>Nominations and Appointments Committee</td>
</tr>
<tr>
<td>PhD</td>
<td>Doctor of Philosophy</td>
</tr>
<tr>
<td>QC</td>
<td>Queens Counsel</td>
</tr>
<tr>
<td>SRL</td>
<td>Speech Referenced Limiting</td>
</tr>
<tr>
<td>TGA</td>
<td>Therapeutic Goods Administration</td>
</tr>
<tr>
<td>VISTA</td>
<td>Visiting Implant Specialists to Australia</td>
</tr>
</tbody>
</table>
Peer reviewed journal articles (published)


Conference proceedings
(published)


Conference presentations


3: Ching TYC. Binaural hearing and bimodal fitting. Symposium for Educators of the deaf, Shanghai, February 2009.


33: Gardner-Berry K. Can a gap detection response be measured in babies with normal hearing using cortical auditory evoked potentials (CAEPs) and is the response symmetrical between left and right ears. The 21st IERASG Biennial Symposium, Rio de Janeiro, Brazil, June 2009.


Other


4: Williams, W, Burgess, M [2009]. The Combination of Workplace and Leisure Noise Exposure. Acoustics Bulletin Vol 34(2) March/April (adapted from Acoustics Australia 2007 35(3)).


8: The HEARing CRC. Australian Science Festival, Amazing World of Science, Canberra, Australia, May 2009.

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DIRECTORS’ DECLARATION 62

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AUDITOR’S INDEPENDENCE DECLARATION 64
The directors present their report together with the financial report of the Hearing CRC Limited ("the Company") for the year ended 30 June 2009 and the auditor’s report thereon.

1: Directors

The HEARing CRC Ltd was established for the purposes of managing and conducting the activities of the Hearing Cooperative Research Centre, established and funded under the Commonwealth of Australia Cooperative Research Centres Program.

The HEARing CRC Ltd is established and operates under a Member’s Agreement, whereby each of the five Core Members (namely Australian Hearing, Cochlear Limited, Macquarie University, Siemens Hearing Instruments Pty Ltd, and The University of Melbourne) have rights to appoint a nominee director to the Board.

The directors of the Company at any time during or since the end of the reporting period are:

Richard Searby
AO QC MA(Oxon) HonLLD(Deakin)
Chairman
Independent

Robert Cowan
BSc (Hons) MBA PhDI(Melb) DipAud GrCertHealth Economics GrDipTechMgt FAudSA(CCP) MAICD
Director and Chief Executive Officer

Robin Evans
BE PhD(Newcastle)
Director
(Nominee Director – University of Melbourne)

Anthea Green
BA
Director
(Nominee Director – Australian Hearing Services)

Kathryn Greiner
AO BSocWork
Director
(Nominee Director – AHS)

Neville Mitchell
BComm CA(SA) CA
Director
(Nominee Director ~ Cochlear Ltd)

Jim Piper
BSc(Hons) PhD(Otago)
Director
(Nominee Director ~ Macquarie University)

Barry Roberts
FCPA FCIS
Director
(Nominee Director – Siemens Instruments Pty Ltd)

Note: the biographies of Directors, included in the Annual Report and forming part of this report, have been provided on pages 10-12 of this report.
2: Company secretary

The Company Secretary as at 30 June 2009 was Mrs Lisa Norden who also acts as Chief Financial Officer (CFO) of the Company. Mrs Norden has 20 years of financial experience in industry and not-for-profit organisations. Her qualifications include Certified Practicing Accountant (CPA), Chartered Secretaries Australia Corporate Governance Graduate Diploma and Australian Institute of Company Directors Course Diploma. Mrs Norden was appointed Company Secretary on 10 April 2009.

During the year, the position of Company Secretary was held by Mr Lorensz Senn from 25 August 2008 – 7 April 2009 and by Ms Jennifer Lightowlers, a principal partner of Francis Abourizk Lightowlers (FAL) from 1 July 2008 – 25 August 2008.

3: Directors’ meetings

The number of directors’ meetings (including meetings of Board committees of directors) and number of meetings attended by each of the directors of the Company during the financial reporting period are as shown in the following table:

<table>
<thead>
<tr>
<th>DIRECTOR</th>
<th>BOARD OF DIRECTORS</th>
<th>FINANCE AND AUDIT COMMITTEE</th>
<th>NOMINATIONS AND APPOINTMENTS COMMITTEE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>Richard Searby – Chairman</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Robert Cowan</td>
<td>4</td>
<td>4</td>
<td>n/a</td>
</tr>
<tr>
<td>Robin Evans</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Anthea Green (resigned Sept 2008)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Kathryn Greiner (appointed Nov 2008)</td>
<td>3</td>
<td>3</td>
<td>n/a</td>
</tr>
<tr>
<td>Neville Mitchell</td>
<td>4</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Jim Piper</td>
<td>3</td>
<td>4</td>
<td>n/a</td>
</tr>
<tr>
<td>Barry Roberts</td>
<td>4</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Dominic Jenkins (alternate for Barry Roberts)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

A: Number of meetings attended
B: Number of meetings held during the time the director held office during the year
4: Corporate governance

The Board of Directors is accountable to the Commonwealth and the Members for the governance, management and control of the business and affairs of the Company. Currently the Board comprises an independent chair, nominees of each or the five Core Members to the HEARing CRC (Australian Hearing, Cochlear, Siemens Hearing Instruments, Macquarie University and The University of Melbourne) and its Chief Executive Officer (CEO). The Board is actively seeking to recruit an additional two independent directors. In 2008, the HEARing CRC amended its Constitution to allow appointment of alternate directors for the five nominee directors consistent with the terms of the Member’s Agreement.

The HEARing CRC operates under the terms and guiding doctrines of: its Constitution, the Member’s Agreement for the establishment and operation of the Hearing Cooperative Research Centre between each of the individual Members and the HEARing CRC Ltd; and the agreement between the Commonwealth of Australia and the HEARing CRC Ltd (Commonwealth Agreement). The HEARing CRC follows good practice as recommended by ASX corporate governance practices.

To assist the Board in fulfilling its duties, it has established two committees: (1) Finance and Audit; and (2) Nominations and Appointments. Details of each of these committees are stated below. The day-to-day management of the Company has been delegated to the CEO and through him, the Management Team.

The HEARing CRC has also clarified the structure of its intellectual property trusts and management arrangements with its commercial arm HearWorks Pty Ltd. In respect of this, HEARing CRC has proposed to the Members to revoke the appointment of HearWorks Pty Ltd as the Trustees of the IP Trust and to appoint Hear IP Pty Ltd as Trustee. Hear IP Pty Ltd has been incorporated for the purpose of acting as Trustee for the HEARing CRC IP Trust and will operate under the Trust Deed signed by the HEARing CRC, its Members and the Trustee (initially HearWorks).

4.1: Finance and Audit Committee

The Finance and Audit Committee assists the Board by providing oversight of the financial operations and affairs of the Company. This Committee also oversees the relationship with the external auditor, and the process of identification and management of business, commercial and financial risks. For the reporting period this committee met three times and the members’ attendance record is disclosed in the table of meetings. It is Company practice that the CEO and CFO are in attendance for all meetings of this Committee.

The members of the Finance & Audit Committee during the period were:
- Mr Barry Roberts (Chair)
- Mr Richard Searby AO QC (ex officio)
- Prof Rob Evans
- Ms Anthea Green (resigned Sept 2008)
- Mr Neville Mitchell (appointed Nov 2008)

4.2: Nominations and Appointments Committee

The Nominations and Appointments Committee assists the Board by making recommendations on the appointment and remuneration of directors and senior executives of the HEARing CRC and HearWorks Pty Ltd. If required, this Committee also assists in the appointment of a Chairman, or CEO, and in making recommendations on the remuneration of these officers. For the reporting period this committee met twice and the members’ attendance record is disclosed in the table of meetings. The CEO attends meetings of the Committee as required.

The members of the Nominations and Appointments Committee during the year were:
- Ms Kathryn Greiner (Chair) (appointed Nov 2008)
- Mr Richard Searby AO QC (ex officio)
- Ms Anthea Green (Chair) (resigned Sept 2008)
- Mr Barry Roberts

4.3: Risk Management

Oversight of the risk management system

The Board oversees the establishment, implementation and annual review of the Company’s Risk Management System, coordinated through the Finance and Audit Committee. The Chief Executive Officer and the Chief Financial Officer have advised the Board, that the financial reporting risk management and associated compliance and controls have been assessed and found to be operating efficiently and effectively. A risk review will take place in the coming weeks.
4.4: Communication with members

The Company’s members have met on one occasion (AGM 2008) during the reporting period to review the Company’s establishment and activities.

Informal communication with Members occurs on a regular basis by means of an integrated email network, and by regular face-to-face meetings with the CEO and management team members. A travel budget for this activity has been provided. An internal newsletter publication is provided to the Members on a semi-regular basis, and a full annual report of activities is provided to the Members once per annum.

In addition the “Hearing Education and Research Network of Australia” (HEARnet), has been established to increase communication amongst the Members, and with other research agencies and the public who have an interest in hearing research. This is a primary technology transfer activity which will assist in ensuring that the wider community is informed of developments of HEARing CRC research, and increases the potential that clinical developments will achieve widespread uptake and use.

5: Principal activities

The principal activities of the HEARing CRC are to undertake collaborative research into hearing loss prevention and mitigation leading to innovative products, processes and services that address the economic impact of hearing loss on the Australian economy. Through education and commercialisation of research findings, the HEARing CRC and its Members aim to reduce the incidence of hearing loss and increase the effectiveness of treatments for hearing loss and associated disorders.

Its research program comprises a range of collaborative research projects in the following areas:

1: Biomolecular/Genetic/Physiological solutions to hearing loss;
2: Intelligent Sound Processing;
3: Integrated Bio-engineering; and
4: Clinical Tools, Services and Techniques.

The HEARing CRC was recognised as a health promotion charity by the Australian Taxation Office in March 2009, effective from its registration date of 18 January 2007.

6: Registered office

550 Swanston Street
Audiology, Hearing and Speech Sciences
The University of Melbourne
Victoria 3010

7: Operating and financial review

Total income for the year was $20,200,000 (2008: $17,322,000), which is matched by expenditure, resulting in a zero result for the year. The income for the period includes all cash contributions of the Members to the HEARing CRC and we take this opportunity to thank these Members.

8: Environmental regulations

As a clinical research entity, the HEARing CRC is subject to clinical regulatory requirements and legislation governing such activity in Australia. As such, the Company is aware of and abides by National Health and Medical Research Council (NH&MRC) guidelines, Australian Research Council (ARC) guidelines and Australian Research Ethics Committee (AREC) guidelines. The Company’s operations are not subject to any significant environmental regulation under either Commonwealth or State legislation. However, the Board believes that the Company has adequate systems in place for the management of its environmental obligations and requirements, and is not aware of any breach of those requirements as they apply to the Company.

9: Dividends

The HEARing CRC is limited by guarantee and has no share capital. The directors of the HEARing CRC are precluded by the Company’s Constitution from declaring a dividend.

10: Events subsequent to reporting date

The directors are not aware of any matters or circumstance, subsequent to the reporting period that has significantly affected the activities of the Company, its performance and state of affairs.
11: Likely Developments

The HEARing CRC has signed a facilities agreement with The University of Melbourne in July 2009 to provide office and research facilities to the CRC. The value of one off investment is $600,000 and annual leasing costs are currently capped at $200,000 per year.

12: Indemnification and insurance of officers

The HEARing CRC had and continues to hold directors’ and officers’ insurance in respect to these persons whilst legitimately performing their duties. The Company indemnifies its directors and officers against any liability incurred during the course of executing their duties on behalf of the Company with the exception if the director or officer is found to be in breach of his/her obligations under the Corporations Law.

Insurance premiums

During and since the end of the financial year, the company has paid a premium under a contract insuring the past or present directors and certain officers of the company against liabilities incurred in those capacities except where the liability arises out of a wrongful act as defined by the policy. Particulars of the directors & officers insurance cannot be disclosed without the permission of the insurer.

13: Auditor’s independence declaration

The auditor’s independence declaration is set out on page 64 and forms part of the directors’ report for reporting year ended 30 June 2009.

14: Rounding off

The Company is of a kind referred to in ASIC Class Order 98/100 dated 10 July 1998 and in accordance with that Class Order, amounts in the financial report and directors’ report have been rounded off to the nearest thousand dollars, unless otherwise stated.

This report is made with a resolution of the directors of the Company:

Richard Searby AO QC
Chairman

Dated at Melbourne this 14th day of October 2009.
### INCOME STATEMENT
FOR THE YEAR ENDED 30 JUNE 2009

<table>
<thead>
<tr>
<th>NOTE</th>
<th>2009 ($'000)</th>
<th>18 JAN '07 TO 30 JUN '08 ($'000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>7a</td>
<td>20,200</td>
</tr>
<tr>
<td>Expenditure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contributions – In-kind by members</td>
<td></td>
<td>[14,473]</td>
</tr>
<tr>
<td>Contributions to members for salaries</td>
<td></td>
<td>(4,058)</td>
</tr>
<tr>
<td>Research consumables</td>
<td></td>
<td>(826)</td>
</tr>
<tr>
<td>Consultants and seconded staff</td>
<td></td>
<td>(54)</td>
</tr>
<tr>
<td>Rent</td>
<td></td>
<td>(39)</td>
</tr>
<tr>
<td>Other</td>
<td>7c</td>
<td>(903)</td>
</tr>
<tr>
<td><strong>Deficit from operating activities</strong></td>
<td></td>
<td>(153)</td>
</tr>
<tr>
<td>Finance income</td>
<td>7b</td>
<td>153</td>
</tr>
<tr>
<td><strong>Net finance income</strong></td>
<td></td>
<td>153</td>
</tr>
<tr>
<td>Surplus/(deficit) before income tax</td>
<td></td>
<td>--</td>
</tr>
<tr>
<td>Income tax expense</td>
<td></td>
<td>--</td>
</tr>
<tr>
<td><strong>Surplus/(deficit) for the period</strong></td>
<td></td>
<td>--</td>
</tr>
</tbody>
</table>

The notes on pages 47 to 61 are an integral part of these financial statements.
### BALANCE SHEET

**AS AT 30 JUNE 2009**

<table>
<thead>
<tr>
<th>NOTE</th>
<th>2009 ($'000)</th>
<th>18 JAN '07 TO 30 JUN '08 ($'000)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>➔ Cash and cash equivalents</td>
<td>9a</td>
<td>4,969</td>
</tr>
<tr>
<td>➔ Trade and other receivables</td>
<td>8</td>
<td>196</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>➔ Property, plant and equipment</td>
<td>10</td>
<td>300</td>
</tr>
<tr>
<td><strong>Total non-current assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Liabilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>➔ Trade and other payables</td>
<td>13</td>
<td>1,549</td>
</tr>
<tr>
<td>➔ Deferred income</td>
<td>12</td>
<td>3,907</td>
</tr>
<tr>
<td>➔ Employee benefits</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total current liabilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Net assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Equity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>➔ Retained earnings</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total equity</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The notes on pages 47 to 61 are an integral part of these financial statements.
### STATEMENT OF RECOGNISED INCOME AND EXPENSE FOR THE YEAR ENDED 30 JUNE 2009

<table>
<thead>
<tr>
<th></th>
<th>2009 ('000)</th>
<th>2008 ('000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income and expense recognised directly in equity</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Surplus for the period</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Total recognised income and expense for the period</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

The notes on pages 47 to 61 are an integral part of these financial statements.
### Statement of Cash Flows

**For the Year Ended 30 June 2009**

<table>
<thead>
<tr>
<th>NOTE</th>
<th>2009 ($’000)</th>
<th>18 Jan ’07 to 30 Jun ’08 ($’000)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cash flows from operating activities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cash receipts from members and government</td>
<td>8,330</td>
</tr>
<tr>
<td></td>
<td>Cash paid to suppliers and employees</td>
<td>(7,291)</td>
</tr>
<tr>
<td></td>
<td>Interest received</td>
<td>153</td>
</tr>
<tr>
<td></td>
<td><strong>Net cash from/ (used in) operating activities</strong></td>
<td>9b</td>
</tr>
<tr>
<td></td>
<td>Cash flows from investing activities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Acquisition of property, plant and equipment</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td><strong>Net cash from/ (used in) investing activities</strong></td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Cash flows from financing activities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Repayment of loans</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td><strong>Net cash from/ (used in) financing activities</strong></td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Net increase in cash and cash equivalents</td>
<td>1,192</td>
</tr>
<tr>
<td></td>
<td>Cash and cash equivalents at the beginning of the period</td>
<td>3,777</td>
</tr>
<tr>
<td></td>
<td><strong>Cash and cash equivalents at 30 June</strong></td>
<td>9a</td>
</tr>
</tbody>
</table>

*The notes on pages 47 to 61 are an integral part of these financial statements.*
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2009

1: Reporting entity
The financial report covers HEARing CRC Limited as an individual entity. The Company is limited by guarantee, incorporated and domiciled in Australia. The HEARing CRC Limited is recognised by the ATO as a health promotion charity and is therefore income tax exempt.

The financial statements were approved by resolution of the Board of Directors on 14th October 2009.

2: Basis of preparation

(a) Statement of compliance
The financial report is a general purpose financial report which has been prepared in accordance with Australian Accounting Standards (AASBs) (including Australian Interpretations) adopted by the Australian Accounting Standards Board (AASB) and the Corporations Act 2001.

(b) Basis of measurement
The financial statements have been prepared on the historical cost basis except for the following:

▷ financial instruments at fair value through profit or loss are measured at fair value.

The methods used to measure fair values are discussed further in note 4.

(c) Functional and presentation currency
These financial statements are presented in Australian dollars, which is the Company’s functional currency.

The Company is of a kind referred to in ASIC Class Order 98/100 dated 10 July 1998 and in accordance with that Class Order, all financial information presented in Australian dollars has been rounded to the nearest thousand unless otherwise stated.

(d) Use of estimates and judgements
The preparation of financial statements requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised and in any future periods affected.

3: Significant accounting policies
The accounting policies set out below have been applied consistently to all periods presented in these financial statements. Certain comparative amounts have been reclassified to conform with the current year’s presentation.

(a) Income tax
The Company has been approved for tax exemption status under Division 50-B of the Income Tax Assessment Act 1997 as a not-for-profit entity. The Company has prepared these accounts based on this approval being granted, as its objectives are to maximise hearing health outcomes and to foster research collaboration.

(b) Foreign currency transactions
Transactions in foreign currencies are translated to the respective functional currencies of the Company at exchange rates at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated to the functional currency at the foreign exchange rate at that date. The foreign currency gain or loss on monetary items is the difference between amortised cost in the functional currency at the beginning of the period, adjusted for effective interest and payments during the period, and the amortised cost in foreign currency translated at the exchange rate at the end of the period. Foreign currency differences arising on retranslation are recognised in income statement.

(c) Financial instruments

Non-derivative financial instruments
Non-derivative financial instruments comprise trade and other receivables, cash and cash equivalents, deferred income and trade and other payables.

A financial instrument is recognised if the Company becomes a party to the contractual provisions of the instrument. Financial assets are derecognised if the Company’s contractual rights to the cash flows from the financial assets expire or if the Company transfers the financial asset to another party without retaining control or substantially all risks and rewards of the asset.
Purchases and sales of financial assets are accounted for at trade date, i.e., the date that the Company commits itself to purchase or sell the asset. Financial liabilities are derecognised if the Company’s obligations specified in the contract expire or are discharged or cancelled.

Non-derivative financial instruments are initially measured at cost on trade date, which includes transaction costs, when the related contractual rights or obligations exist. Subsequent to initial recognition these financial instruments are measured as described below.

Cash and cash equivalents comprise cash balances and call deposits. Accounting for finance income is discussed in note 3(k).

Other non-derivative financial instruments are measured at amortised cost using the effective interest method, less any impairment losses.

### (d) Property, plant and equipment

#### (i) Recognition and measurement

Items of property, plant and equipment are measured at cost less accumulated depreciation and accumulated impairment losses.

Cost includes expenditure that is directly attributable to the acquisition of the asset. Borrowing costs related to the acquisition, construction or production of qualifying assets are recognised in profit or loss as incurred.

When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment and are recognised net within “other income” in profit or loss. When revalued assets are sold, the amounts included in the revaluation reserve are transferred to retained earnings.

#### (ii) Subsequent costs

The costs of replacing part of an item of property, plant and equipment is recognised in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Company and its cost can be measured reliably. The carrying amount of the replaced part is derecognised. The costs of the day-to-day servicing of property, plant and equipment are recognised in profit and loss as incurred.

#### (iii) Depreciation

Depreciation is recognised in profit or loss on a straight-line basis over the life of the CRC.

The estimated useful life for the current and comparative periods is as follows:

#### (a) Fixtures and fittings – 5 years

Depreciation methods, useful life and residual values are reviewed at each reporting date.

### (e) Impairment of Assets

A financial asset is assessed at each reporting date to determine whether there is any objective evidence that it is impaired. A financial asset is considered to be impaired if objective evidence indicates that one or more events have had a negative effect on the estimated future cash flows of that asset.

An impairment loss in respect of a financial asset measured at amortised cost is calculated as the difference between its carrying amount, and the present value of the estimated future cash flows discounted at the original effective interest rate. An impairment loss in respect of an available-for-sale financial asset is calculated by reference to its fair value.

Individually significant financial assets are tested for impairment on an individual basis. The remaining financial assets are assessed collectively in groups that share similar credit risk characteristics.

All impairment losses are recognised in profit or loss. Any cumulative loss in respect of an available-for-sale financial asset recognised previously in equity is transferred to profit or loss.

An impairment loss is reversed if the reversal can be related objectively to an event occurring after the impairment loss was recognised. For financial assets measured at amortised cost and available-for-sale financial assets that are debt securities, the reversal is recognised in profit or loss. For available-for-sale financial assets that are equity securities, the reversal is recognised directly in equity.

### (f) Research and development

Expenditure on research and development activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognised in the year when incurred. Members of the HEARing CRC directly employ research staff.
(g) Employee benefits

短期福利

短期间员工福利义务是按未折现基础测量的，并作为与相关服务相关的费用而列支。

如果公司有现时的或推定的责任支付该金额，在该服务完成后由员工提供的结果，那么，将确认一项负债，其金额是可靠的。

(h) Revenue

收益

收益从提供的服务是根据交易完成的阶段比例，在报告日期。

利息收入

利息收入和其他偶然收入是根据公司控制的义务相关的考虑。

现金贡献收到的成员

成员收到的现金贡献收益是根据公司控制或有权索取贡献。

政府补助

政府补助是当公司控制资产时确认为收益。

在-kind contributions

在-kind contributions from Members are brought to account as revenue and expenditure incurred in accordance with AASB 1004. These in-kind contributions are measured at fair value based on the dollar value provided by each Member in their reporting to the Company consistent with the valuation principles agreed under the terms of the HEARING CRC Member’s Agreement.

(i) Lease payments

偿付租金

偿付租金在直线下列示期间的租赁费用。收到的租赁激励被确认为总租赁费用的一个组成部分，超过租赁期间。

(j) Goods and services tax

货物及服务税

收益、费用及资产被按货物及服务税（GST）的净额确认，而若GST不可恢复，按GST的净额确认。

应收账款和应付账款的金额被按GST的净额记录。GST的组成部分在投资和融资活动中的现金流量被分类为经营活动的现金流量。

(k) Finance income and expenses

融资收入和费用

融资收入包括投资头寸的利息收入。利息收入按收入确认。

(l) New standards and interpretations not yet adopted

新标准及解释

新标准及解释已在2009年6月30日的财务报告中采用，但尚未在2010财年的财务报告中采用：

- Revised AASB 101 Presentation of Financial Statements (2007) introduces the term total comprehensive income, which represents changes in equity during a period other than those changes resulting from transactions with owners in their capacity as owners.

  Total comprehensive income may be presented in either a single statement of comprehensive income (effectively combining both the income statement and all non-owner changes in equity in a single statement) or, in an income statement and a separate statement of comprehensive income. Revised AASB 101, which becomes mandatory for the Company’s 30 June 2010 financial statements, is expected to have a significant impact on the presentation of the financial statements. The Company plans to provide total comprehensive income in a single statement of comprehensive income for its 2010 financial statements.
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2009 (cont.)

4: Determination of fair values

A number of the Company’s accounting policies and disclosures require the determination of fair value, for both financial and non-financial assets and liabilities. Fair values have been determined for measurement and / or disclosure purposes based on the following methods. Where applicable, further information about the assumptions made in determining fair values is disclosed in the notes specific to that asset or liability.

(a) Property, plant and equipment
The market value of property is the estimated amount for which a property could be exchanged on the date of valuation between a willing buyer and a willing seller in an arm’s length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion. The market value of items of plant, equipment, fixtures and fittings is based on the quoted market prices for similar items.

(b) Trade and other receivables
The fair value of trade and other receivables is estimated as the present value of future cash flows, discounted at the market rate of interest at the reporting date.

(c) In-kind contributions
The fair value of in-kind contributions is as per the terms of the Member’s Agreement.

5: Financial risk management

Overview
The Company has exposure to the following risks from their use of financial instruments:

(a) credit risk.
(b) liquidity risk
(c) market risk.

This note presents information about the Company’s exposure to each of the above risks, their objectives, policies and processes for measuring and managing risk, and the management of capital. Further quantitative disclosures are included throughout this financial report.

The Board of Directors has overall responsibility for the establishment and oversight of the risk management framework. The Board has established the Finance & Audit Committee, which is responsible for developing and monitoring risk management policies. The Committee reports regularly to the Board of Directors on its activities.

Risk management policies have been established to identify and analyse the risks faced by the Company, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Company’s activities. The Company through its training and management standards and procedures aim to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

(a) Credit risk
Credit risk is the risk of financial loss to the Company if a customer fails to meet its contractual obligations, and arises principally from the Company’s receivables from customers and investment securities.

Trade and other receivables
The Company’s credit exposure throughout the year was primarily (approximately 75%) to the Government followed by some of its research participants (24%) with which it has a close working relationship. The majority of the credit exposure is limited to Australia. The Finance & Audit Committee and management monitor the credit exposure throughout the year.

Investments
The Company limits its exposure to credit risk by only investing in liquid securities. All its securities have throughout the year been held with an Australian Bank.

(b) Liquidity risk
Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they fall due. The Company has all cash investments which it can draw on when required. The Company’s approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Company’s reputation.

The Company has no overdraft facilities or loans taken out at year end.

(c) Market risk
Market risk is the risk that changes in market prices, such as interest rates, will affect the Company’s income or the value of its holdings of financial instruments. The Company has limited market risk as it does not directly trade and holds all investments in cash. The Company’s interest rate risk all relates to variable rates.

6: Capital management
There were no changes in the Company’s approach to capital management during the year.
### 7: Income and expenses

**2009**

18 JAN ’07 TO 30 JUN ’08

<table>
<thead>
<tr>
<th></th>
<th>$ ('000)</th>
<th>$ ('000)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>7(a): Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commonwealth government CRC program grants</td>
<td>4,176</td>
<td>1,955</td>
</tr>
<tr>
<td>Contributions from members – cash contributions</td>
<td>1,395</td>
<td>1,408</td>
</tr>
<tr>
<td>Contributions from members – in-kind contributions</td>
<td>14,473</td>
<td>13,684</td>
</tr>
<tr>
<td>Other income</td>
<td>156</td>
<td>275</td>
</tr>
<tr>
<td><strong>Total income</strong></td>
<td>20,200</td>
<td>17,322</td>
</tr>
<tr>
<td><strong>7(b): Finance income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest</td>
<td>153</td>
<td>41</td>
</tr>
<tr>
<td><strong>7(c): Other expenses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal</td>
<td>78</td>
<td>134</td>
</tr>
<tr>
<td>Patents &amp; licensing</td>
<td>51</td>
<td>--</td>
</tr>
<tr>
<td>Travel</td>
<td>86</td>
<td>75</td>
</tr>
<tr>
<td>Audit</td>
<td>37</td>
<td>30</td>
</tr>
<tr>
<td>Other</td>
<td>651</td>
<td>178</td>
</tr>
<tr>
<td><strong>Total other expenses</strong></td>
<td>903</td>
<td>417</td>
</tr>
<tr>
<td><strong>7(d): Personnel expenses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personnel costs associated with wages and salaries during the reporting period were disclosed as part of contributions to members for salaries in the Income Statement.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contributions to members for salaries</td>
<td>4,058</td>
<td>2,462</td>
</tr>
</tbody>
</table>
8: Trade and other receivables

<table>
<thead>
<tr>
<th></th>
<th>2009 ('000)</th>
<th>18 JAN '07 TO 30 JUN '08 ('000)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade receivables</td>
<td>--</td>
<td>609</td>
</tr>
<tr>
<td>Other receivables due from related parties</td>
<td>196</td>
<td>136</td>
</tr>
<tr>
<td><strong>Total receivables</strong></td>
<td>196</td>
<td>745</td>
</tr>
</tbody>
</table>

The Company’s exposure to credit risk and impairment losses related to trade and other receivables are disclosed in note 15.

9(a): Cash and cash equivalents

<table>
<thead>
<tr>
<th></th>
<th>2009 ('000)</th>
<th>18 JAN '07 TO 30 JUN '08 ('000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank balances</td>
<td>2,041</td>
<td>658</td>
</tr>
<tr>
<td>Call deposits</td>
<td>2,928</td>
<td>3,119</td>
</tr>
<tr>
<td><strong>Cash and cash equivalents in the statement of cash flows</strong></td>
<td>4,969</td>
<td>3,777</td>
</tr>
</tbody>
</table>

The Company’s exposure to interest rate risk and a sensitivity analysis for financial assets are disclosed in note 15.
9(b): Reconciliation of cash flows from operating activities

<table>
<thead>
<tr>
<th></th>
<th>2009 ('000)</th>
<th>18 JAN '07 TO 30 JUN '08 ('000)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cash flows from operating activities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surplus for the period</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Operating profit before changes in working capital and provisions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in trade and other receivables</td>
<td>549</td>
<td>(745)</td>
</tr>
<tr>
<td>Change in trade and other payables</td>
<td>(1,002)</td>
<td>2,251</td>
</tr>
<tr>
<td>Change in deferred income</td>
<td>1,636</td>
<td>2,271</td>
</tr>
<tr>
<td>Change in employee benefits</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td><strong>Net cash from operating activities</strong></td>
<td>1,192</td>
<td>3,777</td>
</tr>
</tbody>
</table>

10: Property, plant and equipment

<table>
<thead>
<tr>
<th></th>
<th>2009 ('000)</th>
<th>18 JAN '07 TO 30 JUN '08 ('000)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Furniture and fittings</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cost</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opening balance</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Net additions/(disposals)</td>
<td>300</td>
<td>--</td>
</tr>
<tr>
<td>Closing balance</td>
<td>300</td>
<td>--</td>
</tr>
<tr>
<td><strong>Accumulated depreciation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opening balance</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Depreciation for the year</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Closing balance</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Net book value</td>
<td>300</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total property, plant and equipment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td>300</td>
<td>--</td>
</tr>
<tr>
<td>Accumulated depreciation</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Total written down amount</td>
<td>300</td>
<td>--</td>
</tr>
</tbody>
</table>
### 11: Capital and reserves

<table>
<thead>
<tr>
<th></th>
<th>2009 ('000)</th>
<th>18 JAN ’07 TO 30 JUN ’08 ('000)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Share capital</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On issue at 30 June 2008 and 30 June 2009</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

The Company is a public company limited by guarantee.

### 12: Deferred income

<table>
<thead>
<tr>
<th></th>
<th>2009 ('000)</th>
<th>18 JAN ’07 TO 30 JUN ’08 ('000)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unexpended Government Grants</strong></td>
<td>2,234</td>
<td>2,196</td>
</tr>
<tr>
<td><strong>Funds in advance</strong></td>
<td>1,673</td>
<td>75</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3,907</td>
<td>2,271</td>
</tr>
</tbody>
</table>

The Company has utilised revenue from the Members’ cash contributions, the NSW OSMR grant and from bank interest to fund activities as agreed under the Hearing CRC Member’s Agreement and initial Operational Plan. Commonwealth CRC Program grants have been applied to the activities as agreed under the Hearing CRC Commonwealth Agreement (and its associated Schedules), and the unexpended government grants represent activities not yet undertaken.

Hearworks Pty Ltd paid its seven year commitment in 2009. Unexpended funds represent activities not yet undertaken.

*The Company’s exposure to liquidity risk is disclosed in note 15.*
### 13: Trade and other payables

<table>
<thead>
<tr>
<th></th>
<th>$ ('000)</th>
<th>$ ('000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade payables</td>
<td>148</td>
<td>844</td>
</tr>
<tr>
<td>Other payables</td>
<td>400</td>
<td>1,378</td>
</tr>
<tr>
<td>Other payables owed to related parties</td>
<td>1,000</td>
<td>29</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,548</strong></td>
<td><strong>2,251</strong></td>
</tr>
</tbody>
</table>

The Company’s exposure to liquidity risk related to trade and other payables is disclosed in note 15.

### 14: Employee benefits

<table>
<thead>
<tr>
<th></th>
<th>$ ('000)</th>
<th>$ ('000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee entitlements</td>
<td>9</td>
<td>--</td>
</tr>
</tbody>
</table>
15: Financial instruments

The Company’s financial instruments consist of cash held in banks, accounts receivable and payable. During the reporting period it did not trade in and as at 30 June 2009 had no exposure to derivative instruments.

Credit risk

(a) Exposure to credit risk

The carrying amount of the company’s financial assets represents the maximum credit exposure. The company’s maximum exposure to credit risk at the reporting date was:

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>18 JAN ‘07 TO 30 JUN ‘08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial assets</td>
<td>$\text{('000)}$</td>
<td>$\text{('000)}$</td>
</tr>
<tr>
<td>Receivables</td>
<td>196</td>
<td>745</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>4,969</td>
<td>3,777</td>
</tr>
<tr>
<td><strong>Total financial assets</strong></td>
<td><strong>5,165</strong></td>
<td><strong>4,522</strong></td>
</tr>
</tbody>
</table>

None of the Company’s receivables are past due and no impairment losses were recognised at 30 June 2009.

The Company’s exposure to credit risk for trade receivables at the reporting date by geographic region was:

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>18 JAN ‘07 TO 30 JUN ‘08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>196</td>
<td>745</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>196</td>
<td>745</td>
</tr>
</tbody>
</table>

The Company’s most significant customer outstanding amount is $189,750 (2008: $189,750) as at 30 June 2009. This debt was settled prior to issue of these financial statements.
Liquidity Risk

The Company’s exposure to liquidity risk is as follows:

<table>
<thead>
<tr>
<th>30 JUNE 2009</th>
<th>CARRYING AMOUNT</th>
<th>CONTRACTUAL CASH FLOWS</th>
<th>6 MONTHS OR LESS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$ (’000)</td>
<td>$ (’000)</td>
<td>$ (’000)</td>
</tr>
<tr>
<td>Non-derivative financial liabilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payables</td>
<td>1,549</td>
<td>1,549</td>
<td>1,549</td>
</tr>
<tr>
<td>Deferred income</td>
<td>3,907</td>
<td>3,907</td>
<td>3,907</td>
</tr>
<tr>
<td>Non-derivative total financial liabilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5,456</td>
<td>5,456</td>
<td>5,456</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>30 JUNE 2008</th>
<th>CARRYING AMOUNT</th>
<th>CONTRACTUAL CASH FLOWS</th>
<th>6 MONTHS OR LESS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$ (’000)</td>
<td>$ (’000)</td>
<td>$ (’000)</td>
</tr>
<tr>
<td>Non-derivative financial liabilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payables</td>
<td>2,251</td>
<td>2,251</td>
<td>2,251</td>
</tr>
<tr>
<td>Deferred income</td>
<td>2,271</td>
<td>2,271</td>
<td>2,271</td>
</tr>
<tr>
<td>Non-derivative total financial liabilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4,522</td>
<td>4,522</td>
<td>4,522</td>
</tr>
</tbody>
</table>

The Company’s policy is that all contracted cash flows are paid within 6 months or less.
Market Risk

Interest rate risk

The Company does not hold any fixed rate financial assets and liabilities. All interest is applied to the funding of the Activities only, and is therefore not “retained” by the Company if unspent.

Investments in short-term receivables and payables are not exposed to interest rate risk.

As at reporting date, the interest rate profile of the Company’s interest-bearing financial instruments was:

Cash flow sensitivity analysis for variable rate instruments

A change of 100 basis points in interest rates at the reporting date would have increased (decreased) equity and the surplus or deficit by the amount shown below. The analysis assumes that all other variables remain constant.

<table>
<thead>
<tr>
<th>Variable rate instruments</th>
<th>CARRYING AMOUNT</th>
<th>2009</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and cash equivalents</td>
<td>($’000)</td>
<td>-1%</td>
<td>-1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-1%</td>
<td>-1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+1%</td>
<td>+1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+1%</td>
<td>+1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>($’000)</td>
<td>($’000)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SURPLUS</td>
<td>EQUITY</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>4,969</td>
<td>[49]</td>
<td>(49)</td>
</tr>
<tr>
<td>Total increase / (decrease)</td>
<td></td>
<td>[49]</td>
<td>(49)</td>
</tr>
</tbody>
</table>

Fair values

Fair values versus carrying amounts

The fair values of financial assets and liabilities are equivalent to the carrying amounts shown in the Balance Sheet as set out in notes 8, 9, 12 and 13.
16: Related parties

(a) Individual directors and executives compensation disclosures

During the reporting period, the following were key governance and management personnel of the Company.

**Non-Executive directors:**
- Mr Richard Searby AO, QC
- Professor Rob Evans
- Ms Anthea Green
- Ms Kathryn Greiner
- Mr Neville Mitchell
- Professor Jim Piper
- Mr Barry Roberts
- Mr Dominic Jenkins

**Executive directors:**
- Associate Professor Robert Cowan

Compensation paid to individual directors and executives was as follows:

<table>
<thead>
<tr>
<th></th>
<th>2009 ('000)</th>
<th>18 JAN '07 TO 30 JUN '08 ('000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short term employee benefits</td>
<td>240</td>
<td>217</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>240</strong></td>
<td><strong>217</strong></td>
</tr>
</tbody>
</table>

Key management personnel costs are listed under “other expenses” and “contributions to members for salaries” in the Income Statement.

Apart from the details disclosed in this note, no director has entered into a material contract with the Company for this financial period and there were no material contracts involving directors’ interests existing at the end of the financial reporting period. Nominee directors and their alternates do not receive compensation.
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 30 JUNE 2009 (cont.)

(b) Associates - HearWorks Pty Ltd

During the year ended 30 June 2009, all related parties’ transactions were made at market prices and in commercial terms. Outstanding balances at year-end were unsecured, interest free and settlement occurs in cash. No guarantees were provided or received for any related party receivable or payable.

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>18 JAN ’07 TO 30 JUN ’08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income – cash contribution to Hearing CRC</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>(Note 7 “cash from members – cash contributions”)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trade receivables – owing (refer Note 8)</td>
<td>--</td>
<td>136</td>
</tr>
<tr>
<td>Trade payables – owed (refer Note 13)</td>
<td>--</td>
<td>29</td>
</tr>
</tbody>
</table>

17: Subsequent event

No matters or circumstances have arisen since the end of the financial period which significantly affected or may significantly affect the operations of the company, the results of those operations, or the state of affairs of the company in future financial years.

18: Auditor’s remuneration

<table>
<thead>
<tr>
<th>Audit services</th>
<th>2009</th>
<th>18 JAN ’07 TO 30 JUN ’08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditors of the Company</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>KPMG Australia:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audit and review of financial reports</td>
<td>28,215</td>
<td>21,000</td>
</tr>
<tr>
<td>Other regulatory audit services</td>
<td>8,360</td>
<td>8,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>36,575</td>
<td>29,000</td>
</tr>
</tbody>
</table>
19: Members guarantee

The company is a company limited by guarantee. If the company is wound up each Member may be required to contribute a maximum of $1.00 towards meeting any outstanding obligations of the company. There were 24 Members of the company as at 30 June 2009.

20: Operating leases

Non-cancellable operating lease rentals are payable as follows:

<table>
<thead>
<tr>
<th></th>
<th>2009 ('000)</th>
<th>18 JAN <code>07 TO 30 JUN </code>08 ('000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than one year</td>
<td>200</td>
<td>--</td>
</tr>
<tr>
<td>Between one and five years</td>
<td>1,000</td>
<td>--</td>
</tr>
<tr>
<td>More than five years</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>1,200</td>
<td>--</td>
</tr>
</tbody>
</table>
1: In the opinion of the directors of HEARing CRC Ltd ['the Company']:

   (a) the financial statements and notes set out on pages 43 to 61, are in accordance with the Corporations Act 2001, including:

       (i) giving a true and fair view of the Company’s financial position as at 30 June 2009 and of its performance, for the financial year ended on that date in accordance with; and

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

   (b) there are reasonable grounds to believe that the Company will be able to pay its debts as and when they become due and payable.

Signed in accordance with a resolution of the directors:

Richard Searby AO QC
Chairman

Dated at Melbourne this 14th day of October 2009.
INDEPENDENT AUDITOR’S REPORT TO
THE MEMBERS OF HEARING CRC LIMITED

Report on the financial report

We have audited the accompanying financial report of HEARing CRC Limited [the company], which comprises the balance sheet as at 30 June 2009, and the income statement, statement of recognised income and expense and cash flow statement for the year ended on that date, a summary of significant accounting policies and other explanatory notes 43 to 61 and the directors’ declaration set out on page 62.

Directors’ responsibility for the financial report

The directors of the company are responsible for the preparation and fair presentation of the financial report in accordance with Australian Accounting Standards (including the Australian Accounting Interpretations) and the Corporations Act 2001. This responsibility includes establishing and maintaining internal control relevant to the preparation and fair presentation of the financial report that is free from material misstatement, whether due to fraud or error; selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

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.

We performed the procedures to assess whether in all material respects the financial report presents fairly, in accordance with the Corporations Act 2001 and Australian Accounting Standards (including the Australian Accounting Interpretations), a view which is consistent with our understanding of the Company’s financial position and of its performance.

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 HEARing CRC Limited is in accordance with the Corporations Act 2001, including:

(a) giving a true and fair view of the Company’s financial position as at 30 June 2009 and of its performance for the year ended on that date; and

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

KPMG
Donald Abell
Partner
Melbourne 14th October 2009.
AUDITOR’S INDEPENDENCE DECLARATION UNDER
SECTION 307C OF THE CORPORATIONS ACT 2001

To: the Directors of HEARing CRC Ltd

I declare that, to the best of my knowledge and belief, in relation to the audit for the financial year ended 30 June 2009 there have been:

- no contraventions of the auditor independence requirements as set out in the Corporations Act 2001 in relation to the audit; and

- no contraventions of any applicable code of professional conduct in relation to the audit.

KPMG

Donald Abell
Partner

Melbourne 14th October 2009.
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