

# AusMedtech 2009

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## Australian Bionic Eye project

Colin Sutton

# Introduction

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- ❑ Historical Background. Lovell & Suaning at UNSW have been working on an implantable retinal prosthesis for over 10 years.
  - ❑ Collaboration with Bionic Ear Institute and Centre for Eye Research led to the involvement of Umeib and NICTA.
  - ❑ Bionic Vision Australia (BVA) formed as an unincorporated joint venture of these parties to co-ordinate the R&D.
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# Intellectual Property

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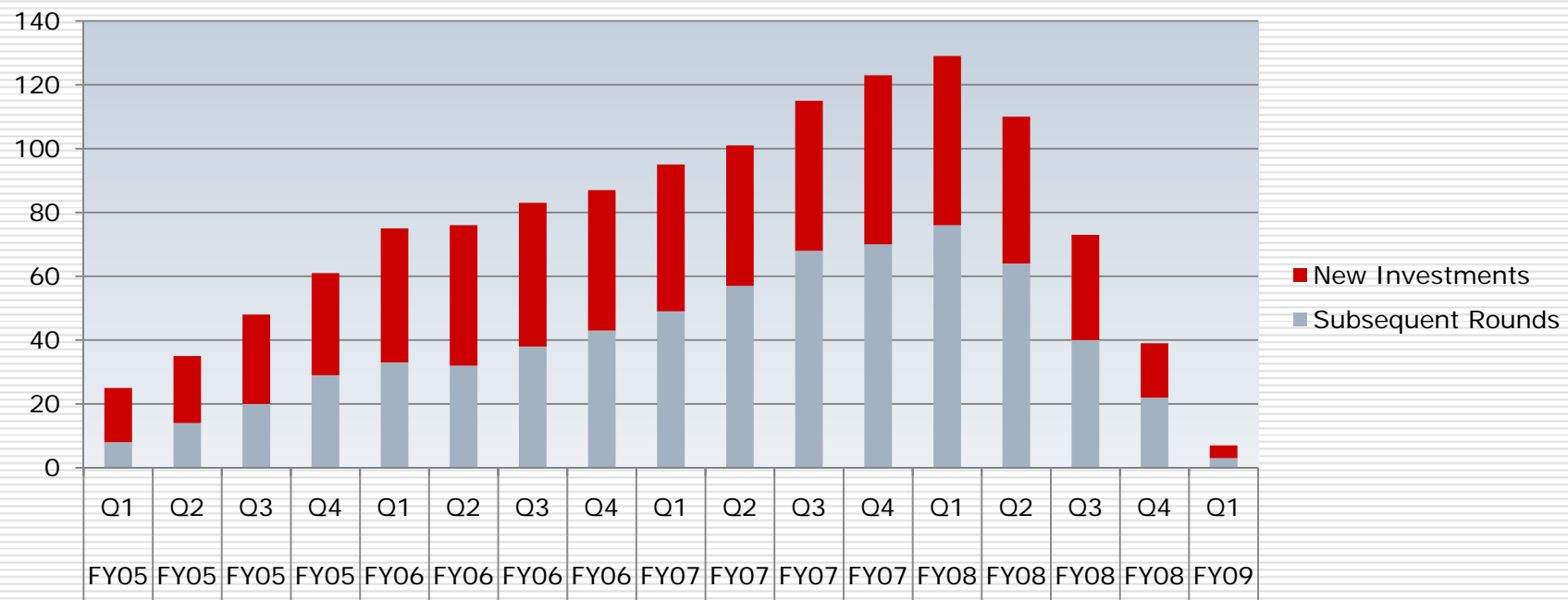
- A significant body of IP had been developed by the researchers but some ownership issues needed to be sorted out between the parties.
  - Ownership of future IP has been specified in a terms sheet that outlines the terms of commercialisation.
  - Product Development will be performed under license by Bionic Vision Technology - an incorporated entity.
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# Funding - a threshold issue

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- ❑ To date all research has been funded by the inventors, universities and the research community – no commercial funds.
  - ❑ The Cochlear project was supported by a government special interest project fund. This was critical to its initial progress.
  - ❑ Funding required convincing the Australian government of the viability of the project and the benefits to Australia and the medical industry.
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# Venture Capital deals have virtually disappeared



Moving average total of VC transactions, FY05 – FY08 (A\$m)

Source: AVCAL Thompson Reuters Websites

# Funding is still undetermined

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- ❑ We remain dependant on government to support commercialisation.
  - ❑ \$50 million has been allocated to the bionic eye project in the FY10 budget papers. ARC has been given responsibility for its administration.
  - ❑ No further details are available as yet and the process could be drawn out.
  - ❑ Numerous parties will bid for these funds.
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# Interface with the optical nerve

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- ❑ Current UNSW design allows for 98 electrodes communicating directly with the retina.
  - ❑ High resolution will require  $>1000$  electrodes.
  - ❑ Interfacing this many electrodes to the retina remains the greatest technical challenge.
  - ❑ The psychophysics of retinal stimulation remains to be understood
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# Business strategy

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- ❑ Continue work within the university/research institutes
  - ❑ Gather sufficient clinical data to demonstrate proof of concept using 1<sup>st</sup> generation or prototype devices
  - ❑ Assuming ARC funding is available begin phase 1 clinical trial.
  - ❑ If that is successful - involve a commercial partner for clinical trials
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# Marketing

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- ❑ Initial efforts will be in the domestic market for the obvious reasons.....
  - ❑ Clinical champion will be developed during the clinical trial phase - probably will be the PI
  - ❑ Overseas markets will be direct and will initially be USA and Europe.
  - ❑ This is not a licensing nor OEM play
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# Product Development

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- ❑ This is still some time off.
  - ❑ The project will remain as Applied Research during the exploratory stage.
  - ❑ Compliance in the R&D phase is critical.
  - ❑ Design Control or the lack thereof can cost months.
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□ Thank you – wish us luck!

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