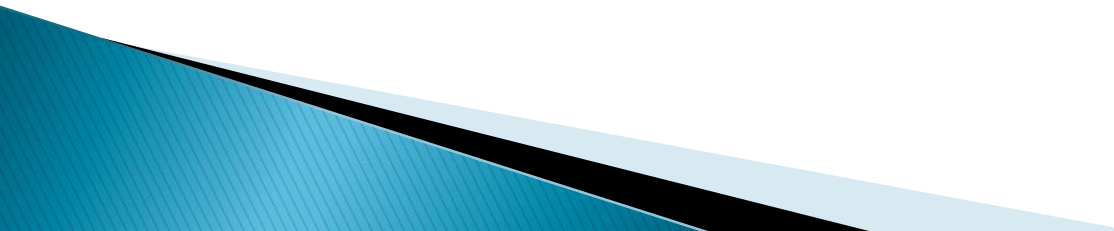


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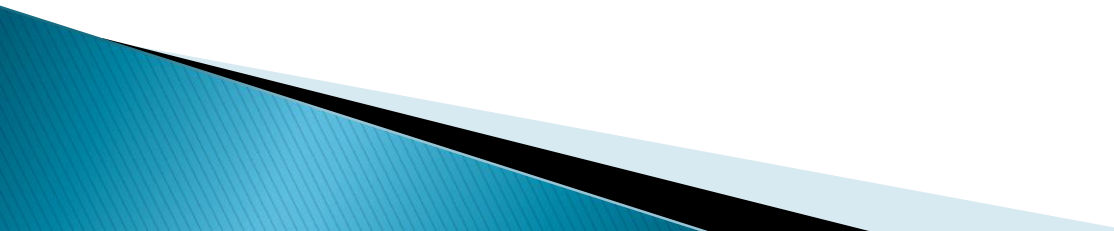
Patenting Medical Devices:  
The Interface between Biological and  
Engineering Components



# The role of the patent attorney

- ▶ Specialist science degree
  - ▶ Specialist in Intellectual Property Law
  - ▶ IP Strategy expertise
  - ▶ Interface between innovator and Patent Offices
  - ▶ Commercial awareness
- 

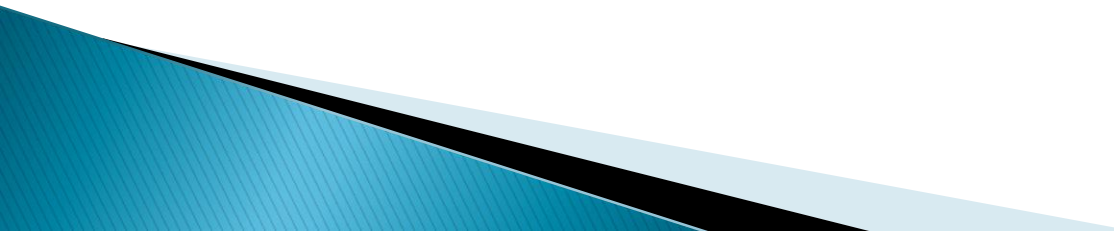
# What are Intangible Assets?

- ▶ Identifiable non-monetary assets that cannot be seen, touched or physically measured, which are created through time and/or effort
  - ▶ Important as they add value to a company
  - ▶ Intellectual Property is an example of an Intangible Asset
- 

# What is Intellectual Property?

- ▶ Results of creative processes
  - Technical inventions
  - Artistic works
  - Brand names and logos
  - Know-how
- ▶ Legal Property
  - Can be bought and sold – has value

# What are IP Rights?

- ▶ Legal Rights
  - ▶ Granted by the State
  - ▶ Prevent unauthorised use of IP
  - ▶ Can be bought/sold/licensed
- 

# IP Strategy in Context

- ▶ IP and IPR are business tools
- ▶ IP Strategy is essential part of business strategy

# Real life example 1

- ▶ Biotech company/University collaboration
- ▶ Innovation: nerve cell growth along etched silicon wafers
- ▶ Applications include prosthetic devices, circuits
- ▶ Biomedical engineers, neuroscientists, materials engineers
- ▶ Joint development agreement – IP ownership
- ▶ Patents held by Biotech Company

*Biotech IPR + Engineering IPR = stronger protection*

# Real life example 2

- ▶ Biomedical University spin-outs
- ▶ Robotic prosthetics – exoskeletons
- ▶ Biomedical engineers, computer scientists, neuroscientists, electrical engineers
- ▶ IP ownership held in two different companies
- ▶ Patents, exclusive license to neurosensor tech

*Engineering principles require human biology knowledge to produce effective medical advances*

# Real life example 3

- ▶ Medical device company (University spin-out)
- ▶ Hip device
- ▶ Electronics, optical electronics, mechanical engineering, materials science, biocompatibility and cell biology
- ▶ Requires excellent communication skills
- ▶ All IP owned in-house (employees/contractors)
- ▶ Contracts, NDAs, patents

*Holistic approach needed to focus on whole system*



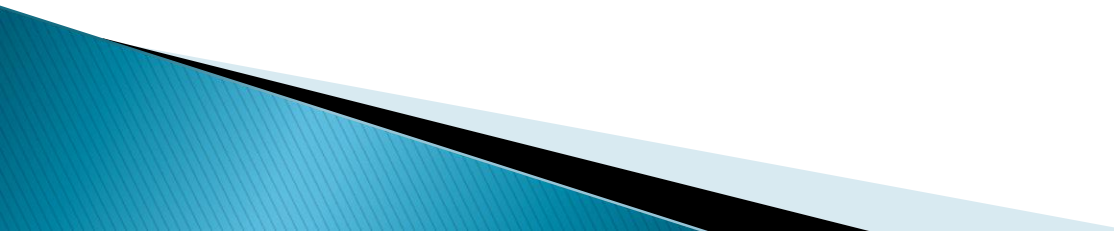
# Real life example 4

- ▶ Mobile phone based health care
- ▶ Tongue imaging technology
- ▶ App-based with comparator analysis server-side
- ▶ Electronics, optical electronics, combined with human biology
- ▶ Patents, NDAs, in-house policies

*IPR = patents & know-how*



# Rapidly expanding...

- ▶ There has been a growth of over 70% in last 10 years in the number of biomedical positions
  - ▶ Specialist institutions established
  - ▶ Fast-growing area of IP generation
  - ▶ Challenge to the patent industry
  - ▶ Opportunity for outstanding collaborative innovation in a multidisciplinary environment
- 

Thank you for your attention

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