

# IP Creation and Management in Academic Research

Gwilym Roberts

Partner, European Patent Attorney

Kilburn & Strobe LLP

16 November 2015

Okinawa Institute of Science and Technology

Graduate University

# Contents

IP Basics

---

IP Practicalities for Academic  
Research

---

## Types of IP

- Patents
  - For technical inventions
  - Requires registration
  - On a country-by-country basis
- Trademarks
  - Brand
- Copyright
  - Tech/Media
- Designs
  - Appearance



## Requirements for Patentability

- Novelty
  - A patent application must be filed before any disclosure of the concept anywhere in the world by anyone
- Inventive Step
  - Invention must be some form of improvement: for example it solves a technical problem
- Technical Effect
  - May be mechanical/software/telecoms/chemical/bio-chemical etc.
  - Will not extend to “mental act”, “business method” or computerisation of such
- What to look out for:
  - Has the inventor spotted and solved a problem with competing technology?
  - Has inventor spotted a potential technical application of a research discovery?

## Patent Systems

- Patents are a national right
- Systems for making international protection cheaper
  - PCT (International) patent application
  - Multi-national systems such as European Patent Office
- Search and Examination
  - Typically repeated country by country
  - The same invention may be expressed differently in different jurisdictions



## The Patent Document

- Description
    - Must be sufficient (invention can be reproduced from description)
    - Should contain all relevant information (information cannot be added later)
  - Claims
    - These are the clauses that describe the key features of the invention
    - Considered both for deciding patentability, and for deciding infringement
1. A silicon electrode for a battery, comprising a silicon substrate defining thereon an array of sub-micron silicon pillars.

## Good Patents

- What makes a strong patent?
  - Comprehensive description
  - Carefully considered claims
  - A good invention!
- What makes a valuable patent?
  - Difficult to design around claims
  - Commercially directed claims
  - Close correlation with target market
  - Strong portfolio of patents



## IP Practicalities for Academic Research - Capture

8

- Inventor/Researchers need to understand IP basics
  - Especially novelty and inventive step
- Inventor/Researchers need to understand how IP capture works within their organisation
  - Many different approaches possible, best to tailor them to your business or environment
- IP Department may consider an IP policy
  - Publication policy
  - Capture policy
  - Exploitation policy
  - Third party intellectual property policy
- Helping the inventors
  - Making easy systems
  - Providing helpful support
  - Providing commercial guidance
  - Providing commercial support

## IP Practicalities for Academic Research – Monetisation

- Manufacture and sale
- Licensing
- Transfer
- Collaboration
- Standards
- Investment

## IP Practicalities for Academic Research – Specific Considerations

- The scientist versus the inventor
  - The scientist makes discoveries, the inventor identifies their commercial potential
- Papers versus patent
  - Publication problems – you must file a patent application before you publish a paper
    - Or present a poster or a talk
    - Or mentioning it to your friend or your wife!
  - With a patent you must be much more focused about how you describe “prior art”
  - The patent may include many variants
  - The patent should be commercially focused

## IP Practicalities for Academic Research – Technology Transfer

- Models
  - Licensing
  - Collaboration
  - Sale
  - Spin-out
- A well organised technology transfer department
  - Understanding of legal issues
  - Understanding of commercial opportunities
  - Commercial support and guidance
  - Liaison with external service providers

## IP Practicalities – Common mistakes

- Publication problems
- Lack of understanding of commercial opportunities
- Lack of determination
- Lack of understanding of costs and timescales of patent system
- Too much humility
  - Some inventors are cleverer than they realise
- Lack of humility
  - Some inventors are not as clever as they think!

## Conclusion

- There are many forms of IP
- Research IP can create very valuable patents
- You must understand the importance of not publishing before a patent application is filed
- You should collaborate with your IP department or technology transfer organisation
- You must understand the commercial situation

## Thank you

Gwilym Roberts  
Partner  
E [groberts@kilburnstrode.com](mailto:groberts@kilburnstrode.com)

Kilburn & Strode LLP  
20 Red Lion Street  
London WC1R 4PJ

T +44 (0) 20 7539 4200  
F +44 (0) 20 7539 4299  
[www.kilburnstrode.com](http://www.kilburnstrode.com)

Patent and Trade Mark Attorneys

Kilburn & Strode