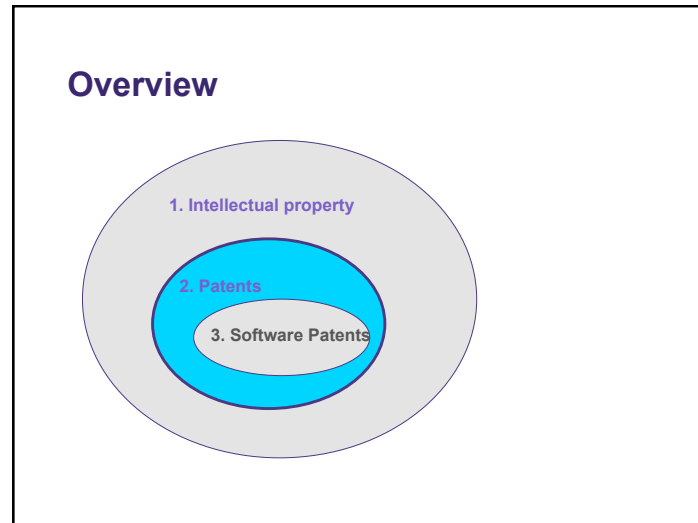


**FPA**  
Patent  
Attorneys

## Intellectual Property

Akanksha Dahiya  
September 2018 @ UNSW

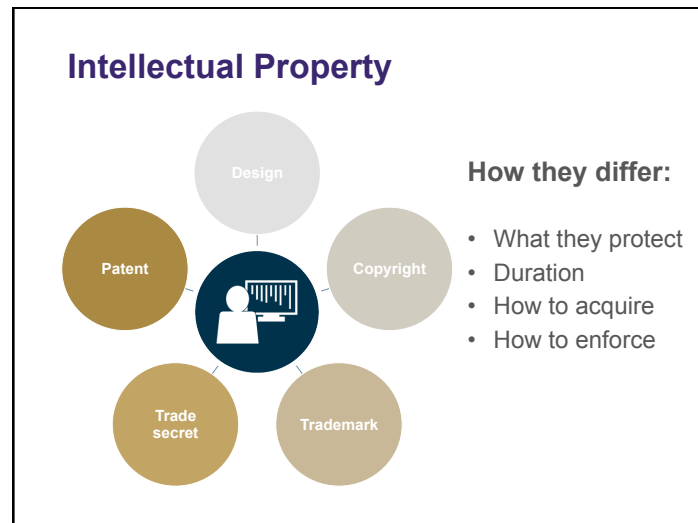


### Intellectual property

"Patents and copyrights are the legal implementation of the base of all property rights: **a man's right to the product of his mind.**"

"What the patent and copyright laws acknowledge is the paramount role of mental effort in the production of material values; these laws protect the mind's contribution in its purest form: **the origination of an idea.**"

- Ayn Rand in *Capitalism: The Unknown Ideal*



## Intellectual Property



### Patent

- Protects **functionality**
- Duration **up to 20 years**
- How to acquire
  - Practical utility
  - New
  - Non-obvious
  - Eligible subject matter
- How to enforce
  - Falls within the patent

## Intellectual Property

### Design

- Protects **appearance**
- Duration **around 10-25 years**
- How to acquire
  - Not identical or substantially similar
- How to enforce
  - identical or substantially similar



AU design no.  
342337



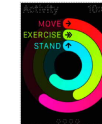
AU design no.  
331716



AU design no.  
334926



AU design no.  
333713



AU design no.  
360961

Technology Intelligence

### Apple fires employee after daughter's video of iPhone X goes viral



Apple's iPhone X in the new leaked footage. Credit: YourUrb

## Intellectual Property

### Trademark ®

- Protects **brands**
- A **sign** capable of distinguishing a trader's goods/services.
- Duration **indefinitely**
- How to acquire
  - First use in commerce
  - Honest concurrent use
- How to enforce
  - substantially identical and/or deceptively similar





## Intellectual Property

Copyright ©

- Protects **Expression of an idea**.  
Literary, artistic, musical, performance...includes computer programs (in C++, Fortran, etc)
- Duration **until death+70years**
- How to acquire
  - No registration required
  - Original work upon material form
- How to enforce
  - Substantial copying
  - Will not protect against independent creation / function

## Intellectual Property

Trade secret

- Protects **confidential information**
- Duration **as long as can be kept confidential**
- How to acquire
  - Information imparted under an obligation of confidence
  - Information has quality of confidence
  - e.g. closed-source software?
- How to enforce
  - Unauthorised use or disclosure
  - Detriment
  - Ineffective against **reverse engineering** or **independent formulation**

## Why patents?



A legal contract:

Between the patentee and the government

Right to exclude others from exploiting your invention for a fixed period

In return for a full disclosure of the invention

## Why patents?

**Patentee's perspective:** Encourages R&D (e.g. pharmaceuticals)

**Society's perspective:** Encourages disclosure of incremental inventions

**Government's:** International obligations:

- World Trade Organisation
- TRIPS agreement – minimum standards for IP

"Subject to [some exclusion], *patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application...*"

## Why patents?

**Patentee's perspective:**

### Sword

- Royalty
- Cease & desist



### Shield

- Deter competitors
- Create risk and uncertainty



### Treasure chest

- Negotiate
- Increased valuation
- Attract capital investment



## Who owns a patent?

### Ownership

- Inventor
- Employer
- University

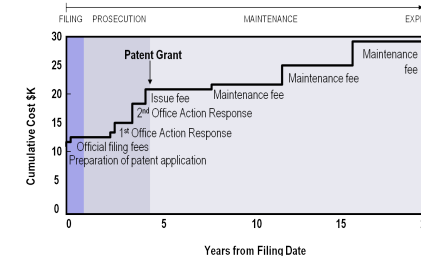
### Assignments

- Transfer of ownership

### Licences

- No transfer of ownership
  - sole
  - exclusive (not even the patent holder!)
  - non-exclusive

## Costs & benefits

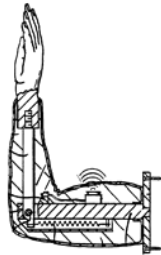


(Source: <http://timreview.ca/article/501>)

### US 5356330 (1994)

Apparatus for simulating a 'high five'

...providing the user with a convenient outlet for the release of excitement



### US 6,285,999 (1998) Google's PageRank patent

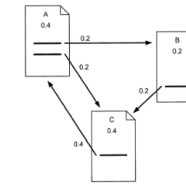
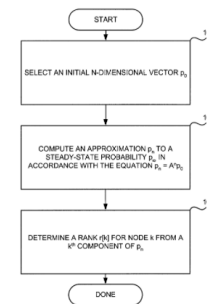


FIG. 2

The basic idea was that information could be ordered in a hierarchy by "link popularity"; the more links a page had, the more popular it was, and thus should be ranked higher.

### What can be patented vs what is worth patenting

Technical considerations

- Patent vs Secrecy
- New & non-obvious?

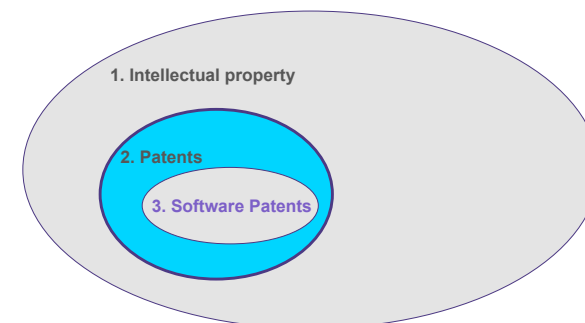
Commercial considerations

- Costs of obtaining patent rights
- Is there a market?
- How do I enforce patent rights

Strategic considerations

- Do I want to attract capital?
- Do my competitors patent a lot?

### Overview



## Patent claim e.g. #1

A method for establishing cryptographic communications comprising the step of:  
encoding a digital message word signal M to a ciphertext word signal C,  
where M corresponds to a number representative of a message and

$$0 \leq M \leq n-1$$

where n is a composite number of the form

$$n=p \cdot q$$

where p and q are prime numbers, and

where C is a number representative of an encoded form of message word M,

wherein said encoding step comprises the step of:

transforming said message word signal M to said ciphertext word signal C  
whereby

$$C \equiv M^e \pmod{n}$$

where e is a number relatively prime to (p-1)·(q-1).



<https://www.google.com/> MIT, US patent no. 4.405.829, filed 1977

## Patent claim e.g. #2

A method for diminishing cross channel interference in a data reduction process  
during the transmission and storage of digital signals from N dependent channels,  
the method comprising the steps of:

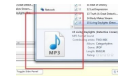
transforming blockwise scanning values of signals from the time domain  
into the frequency domain in spectral values, said spectral values being encoded,  
transmitted and/or stored, decoded and transmitted back in N channels in the time  
domain;

determining a single quantity which is a measure for an overall spectral  
separation between the different channels, based on the spectral values for  
corresponding blocks of the different channels;

comparing the quantity with a predetermined threshold;

performing common encoding of said channels when the quantity falls  
below the predetermined threshold; and

performing separate encoding of said channels when the quantity exceeds  
the threshold.



<https://www.google.com/> Fraunhofer-Ges, US patent no. 5.812.672, filed 1991

## Patent claim e.g. #3

A method for transmitting data in a confined multipath transmission environment at  
radio frequencies in excess of 10 GHz,

said data being provided by an input data channel coupled to transmission  
signal processing means in turn coupled to antenna means,

said method comprising the steps of:

modulating said data, by modulation means of said transmission signal  
processing means, into a plurality of sub-channels comprised of a sequence of  
data symbols such that the period of a sub-channel symbol is longer than a  
predetermined period representative of the time delay of significant ones of non-  
direct transmission paths; and

transmitting, by said antenna means, said sub-channel symbols at said  
radio frequencies in excess of 10 GHz.



<https://www.google.com/> CSIRO, US patent no. 5.487.069, filed 1992

Thank you.

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