



# Software Patents

Alistair Smith



# Introduction

- Consider
  - Fundamentals of Patents
  - Software Patentability
  - Patent Procedure
    - Searching
    - Applying
  - Patent Infringement

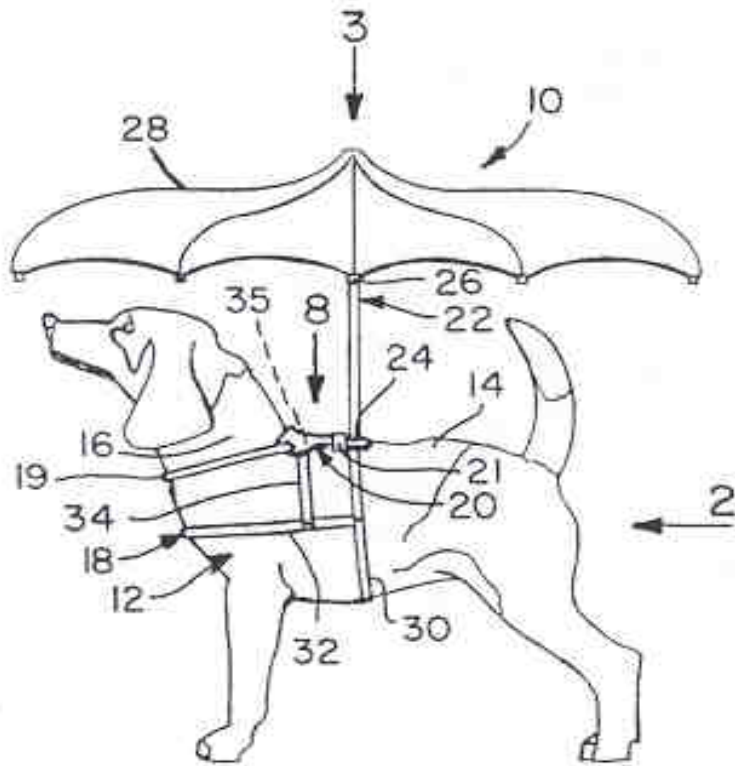


# Patents

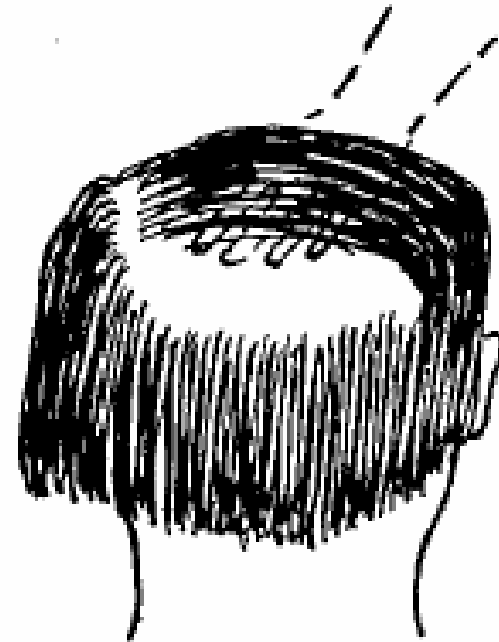
- What is a patent?
  - Protects the way things work
  - Provides a right to prevent others exploiting the invention
- What can be protected?
  - products, methods or processes
- What are the requirements?
  - Novel - new
  - Inventive - not obvious
  - Patentable subject matter
  - Useful
    - USPTO this includes "*anything made by man under the sun which has a useful, concrete and tangible result*"

# Patents

US-5,546,970  
Dog Umbrella



US-4,022,227  
Concealing Partial Baldness



# Patents

- Benefits
  - Right to stop other people exploiting invention
  - Protects concepts not just embodiments
  - “Property”
  - Can be used to obtain a monopoly
  
- Drawbacks
  - Disclosure of invention
  - Limited duration
  - Jurisdictional
  - Expensive

# Software Patents

- US
  - Anything which has useful concrete and tangible result
  - Cannot protect abstract algorithms
    - But use of an algorithm is patentable
  
- Europe
  - Can protect a computer program which operates on a computer system to provide a technical effect
  - Invention must lie in technical features
  
- ANZ
  - Can protect software and business methods
    - Must result in artificial state of affairs
    - Must have means for putting into effect

# Software Patents

- US - State Street Bank v Trust Co
  - computer programmed to transform data which represents discrete dollar amounts into a final share price
  - exclusion for business methods explicitly overturned
  
- AU - Welcome Real-Time v Catuity (May 2001)
  - dynamically storing a merchant's loyalty program on a smart card to allow cards to be issued for different loyalty programs
  - not a business method - method and device used in a business
  
- EP - T 258/03 (Hitachi)
  - auction method implemented using a client-server arrangement
  - used modified dutch auction to avoid data transmission delays
  - selection of auction rules is not technical therefore no invention

# Software Patents

- Japan
  - Invention must use natural laws
    - Does not include economic or mental laws
  - cannot protect business method or software alone
  - BUT software coupled with hardware implementation is patentable
    - eg: merely need to specify which hardware features such as processor and memory perform which functions
- India
  - exclusions similar to Europe but generally applied more strictly
    - often require novel hardware configuration
  - recent attempts to remove restriction were overcome

# Future Directions

- Patent Offices want to harmonise patent process
  - But having difficulty finding common ground
- AU
  - Recent tendency to follow US
  - Likely that law will develop in line with US law
- US
  - US software companies have powerful lobbyists
  - US unlikely to overturn software / business method patents

# US Patent Value

- Vonage To Pay \$58M In Verizon Patent Suit
- Sony To Pay \$150M In Videogame Patent Suit
- Jury Rules Microsoft To Pay \$1.5B
- Motorola's Violations Could Hit \$100M
- Patent Suit Over Telephone Routing Garners \$25M Award
- Toshiba Wins Patent Licensing Countersuit For \$9.5M
- Palm To Pay Xerox \$22.5M To End Lengthy Patent Suit

# US Patent Value

- Microsoft, Autodesk Ordered to Cough Up \$133M
- Sony Determined To Appeal \$90.7M Verdict
- BlackBerry Maker Settles Patent Dispute For \$613M
- Gateway Pays HP \$47M to Settle Patent Litigation
- Quantum Surrenders To Sun Microsystems For \$25M
- Chip Maker Ordered To Pay \$112M in Patent Suit
- MediaTek Settles Patent Battle for \$85M
- Google In \$5B Suit Over Online Phone Product
- Nokia Loses Final Appeal To Avoid \$252M Payment

# US Patent Value

- Forgent Networks
  - Serendipitous discovery of JPEG Patent
    - 1. A method for processing digital signals, where the digital signals have first values, second values and other values, to reduce the amount of data utilized to represent the digital signals and to form statistically coded signals such that the more frequently occurring values of digital signals are represented by shorter code lengths and the less frequently occurring values of digital signals are represented by longer code lengths, comprising, forming first runlength code values representing the number of consecutive first values of said digital signals followed by said second value, forming second runlength code values representing the number of consecutive first values of said digital signals followed by one of said other values.
  - Licensees include Adobe, Sony, Macromedia
    - US\$100M
  - Currently suing number of companies

# Future Directions

- EP
  - Software directive was rejected
  - Attempts to implement Community Patent likely to re-open debate
    - Single Patent covering Europe (as opposed to single application)
  - FFII provide lobbying position for those opposed to software patents
  - Big company lobbyists seems less effective in EP
  - often used as point of negotiation in political arena
  - Likelihood that:
    - some form of restriction will remain
    - software related inventions having technical effect will remain patentable

# Patent Procedure

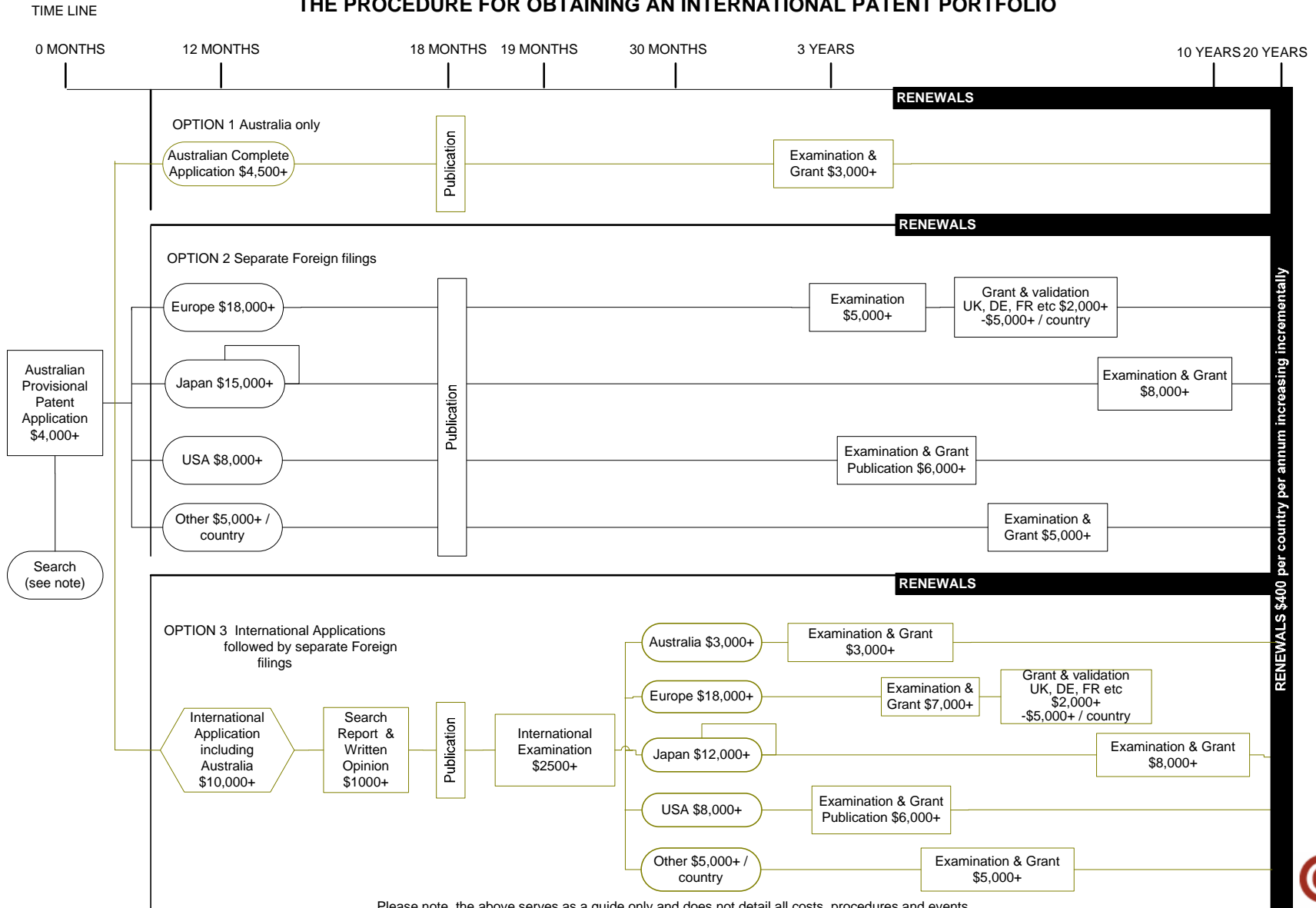
- Optional Prior Art Search ~ 6 weeks
  - used to ensure novel and inventive
  - *search market place / Internet / scientific literature*
  - search previous patent applications and granted patents
  
- File Provisional Application ~ 6 weeks
  - Must be completed before any public disclosure
  - Provides right to obtain protection in ~ 180 countries
  - Lasts for 12 months
  - *provide details of operation of product*
  - prepare written description, claims and drawing

# Patent Procedure

- File applications in selected countries
  - must be completed within 12 months of provisional application
  - required to obtain enforceable protection
  - *consider countries of commercial interest vs expense*
  - consider protection available
  - arrange filing of applications by required deadline
  
- Prosecute each Application before relevant Patent Office
  - official assessment of whether idea is patentable in respective country
  - *provide feedback*
  - monitor deadlines
  - correspond with patent office

# Patent Procedure

## THE PROCEDURE FOR OBTAINING AN INTERNATIONAL PATENT PORTFOLIO



Please note, the above serves as a guide only and does not detail all costs, procedures and events. Furthermore the costs are an estimate based on current exchange rates, Patent Office fees and Overseas Attorney's charges (including GST where applicable).

# Public Disclosure

- Covers any manner of making invention available to public
  - Publication on web-site
  - Presentation at a conference
  - Submission of a paper for review
- Must allow public to determine how invention works
  - Includes by way of reverse engineering
- Can be in any language
- Does not require actual viewing by public
  - Only requires capability to view
- Does not apply when there is confidentiality

# Prior Art Searching

- Aim to identify public disclosures relevant to novelty or inventive step
  - disclosure must be before earliest patent application date
  - disclosure can include public demonstration / abstract
  - publication can be from any country in any language
- Search should cover:
  - international classifications
  - keywords
  - applicant / inventor name searches
  - include scientific literature
  - multiple databases

# Prior Art Searching

- Patent databases:
  - [ep.espacenet.com](http://ep.espacenet.com)
    - access to classifications
    - allows search of multiple countries
    - text search of abstract and title only
  - [www.uspto.gov](http://www.uspto.gov) / [www.google.com/googlepatents](http://www.google.com/googlepatents)
    - allows search of US only
    - text search of entire specification
  - Patbase
    - Pay to access
    - worldwide coverage
    - good such facilities

# Patent Drafting

- Written Description & Drawings
  - Detailed enough to allow implementation by third parties
  - Should cover:
    - broadest concept
    - preferred implementation
    - obvious variations
    - potential workarounds
    - competitors future directions
  - Important to ensure covers all subject matter of interest
- Legal claims
  - Define scope of protection
  - Used in determination of novelty and inventive step
  - Independent claims define broadest scope of protection
  - Dependent claims define fallback positions

# Capturing Inventions

- Maintain detailed records
  - Notebooks should be signed, dated and countersigned
- Identify protectable material
  - Must be before publication
  - Consider papers to be submitted for publication
  - Consider practical use of the technology
- Assess if protection required
  - Provide to commercialisation department for review
- Organise protection
  - Use commercialisation department
  - Must use professional draftspeople

# Patent Infringement

- Occurs when third party performs each and every feature of one independent claim
  - Need careful assessment as claims often broader than description
- Infringing acts include:
  - making / using
  - selling / hiring / offering
  - importing
- Remedies
  - injunction
  - delivery up
  - damages or an account of profits

# Patent Infringement

- Identifying infringement:
  - Identify product of interest
    - Consider elements that may be protected
  - Perform freedom to operate searches to identify relevant patent rights
    - performed by professional
    - searches in each country of interest
  - Review any identified documents
    - check the patents are in force
    - determine if patents are infringed
  - Consider outcome
    - Obtain clearance opinions
    - Consider solutions
  - Continue monitoring
    - Identify previously unpublished applications

# Patent Infringement

- Avoiding infringement
  - Invalidate patent
    - Prior art searches
  - Avoid infringement
    - Prior use (record company operations)
    - Work around
    - Patent watch
  - Commercial solutions
    - Licence
    - Cross licence

# Patent Infringement

- Infringement may not be avoided by:
  - Non commercial use
    - No legislation only anecdotal case law
    - Very difficult to show use is non commercial
    - Even non-commercial use could have a commercial impact
  - Jurisdictional Limitation
    - Hosting on the Internet could result in prosecution anywhere
  - Using open source
    - Obligation that no Patent infringement is not legal warranty
    - Will not indemnify you against legal action
  - Innocent infringement
    - Court more lenient
  - Sale can give rise to liabilities

# Conclusion

- Software can be protected using patents in some circumstances
- The decision lies with the commercialisation department
- Approval should be sought before publication or commercial use

# Davies Collison Cave

– Australia & New Zealand –  
Patent and Trademark Attorneys

## Brisbane

Level 3, 303 Coronation Drive Milton Queensland 4064 Australia  
Telephone +61 7 3368 2255 Facsimile +61 7 3368 2262

## Other Offices

Sydney, Melbourne, Canberra, Newcastle

In association with Davies Collison Cave Solicitors, Intellectual Property Law

E-mail : [asmith@davies.com.au](mailto:asmith@davies.com.au)

Web site : <http://www.davies.com.au>