

# **Inventive Solutions**

## ***Protecting Your Invention 101***





## Outline of Topics

Overview & Introduction

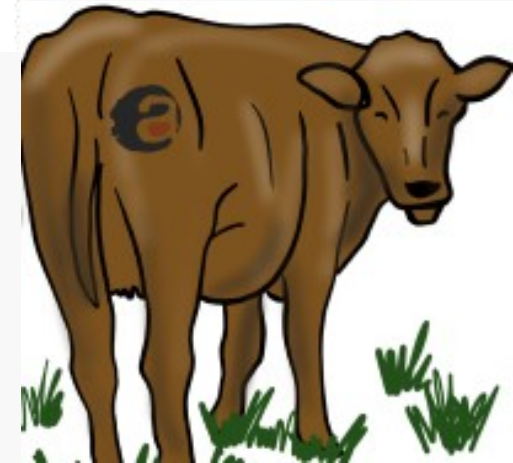
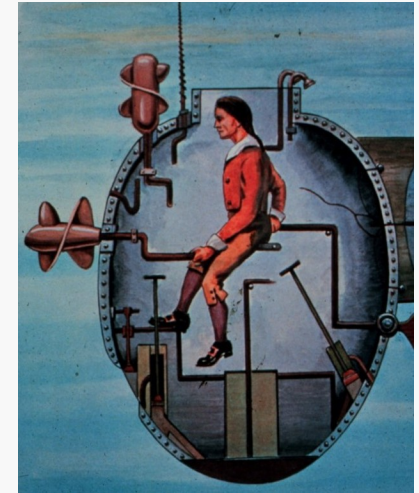
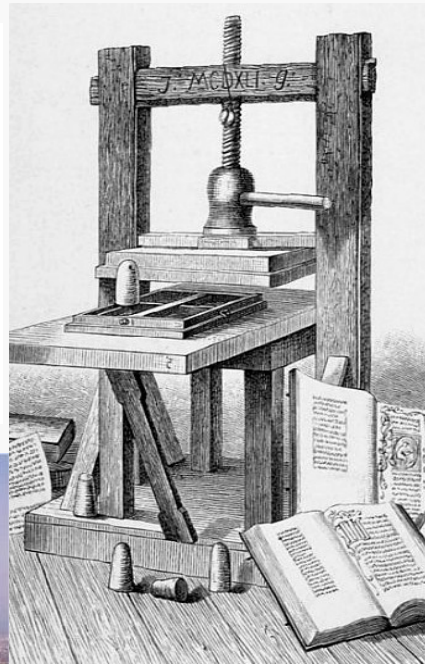
- **Copyrights, Trademarks & Trade Secrets (Biz IP)**
- **Patents – Design & Utility**
- **Prior Art Searches & Provisionals**
- **International Patent Applications**
- **Patents – Process, Risks, Benefits**

Questions





## Overview: Early Intellectual Property





## Introduction – Some Questions

- Are you **inventing**/designing a **new** product?
- Do you need **protection** for your product/idea?
- Could someone **claim** your ideas as their own?
- How are patents & IP **enforced**?
- What are the **benefits** & risks of **patents & IP**?
- How can **IP** help my products/business **succeed**?
- Are there more **affordable** ways to protect IP?

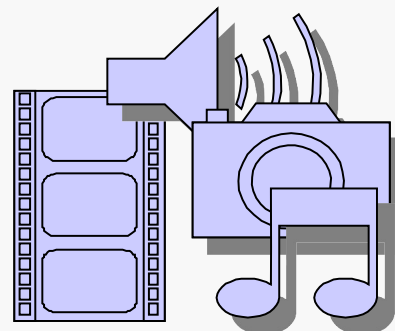
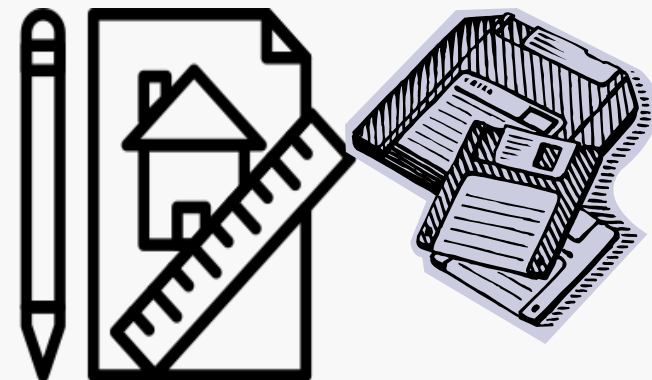


## Introduction – Some Answers

- IP **protects** inventions, reputations & businesses
- IP lets you **disclose** ideas while minimizing risks
- IP allows you to **profit** from your hard work
- IP can **prevent** copying, importing & knockoffs
- IP helps create **certainty** about **ownership**
- IP can be **licensed**, sold, & used as collateral
- IP, if properly employed, can be more **affordable**



## Copyrights © – Examples





## Copyrights © – Basic Info



<b>Definition</b>	<b>Exclusive right to reproduce</b> a creative work secured by a country for its <b>creator</b> .
<b>Examples</b>	Literary, artistic, musical & dramatic works; recordings, performance, communications
<b>Criteria</b>	<b>Original</b> work. Rights to <b>contracted</b> work properly transferred. (i.e. bills paid)
<b>Costs</b>	<b>Owner/Date:</b> Free; <b>Return Mail:</b> Postage <b>Registration:</b> CA\$63/US\$45 online each
<b>Duration</b>	Generally, <b>lifetime</b> of creator <b>plus 70</b> years Cannot protect <b>inventions</b> or <b>trade names</b> .



## Trademarks <sup>TM</sup>/<sup>SM</sup>/<sup>®</sup> – Examples







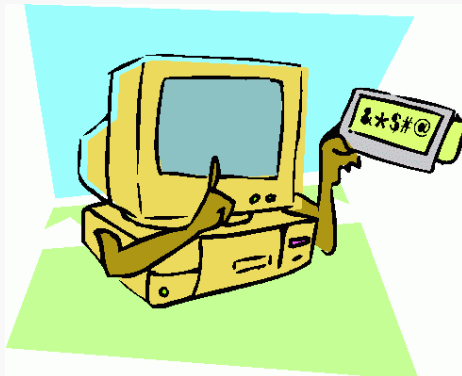
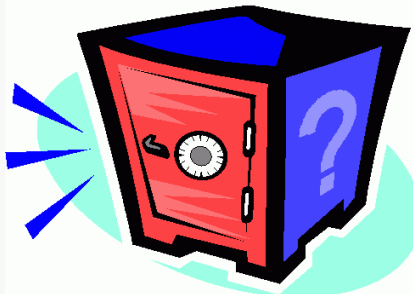
## Trademarks <sup>TM</sup>/<sup>SM</sup>/<sup>®</sup> – Basic Info



<b>Definition</b>	Exclusive right to <b>use, reproduce or sell a word, symbol or design</b> (or combination)
<b>Examples</b>	Business Name, Product Logo, Brandname Distinctive Words, Shapes, Sounds, Media.
<b>Criteria</b>	<b>Distinctiveness, Usage</b> (commodity class) <b>Territory</b> (legal jurisdiction enforced)
<b>Costs</b>	<b>Application:</b> CA\$458/597; US\$250/350 <b>Statement of Use:</b> US\$100(if not in applic.)
<b>Duration</b>	Indefinitely: when maintenance fees paid. (5th year-US then every 10th year [US/CA])



## Trade Secrets







## Trade Secrets – Basic Info



<b>Definition</b>	<b>Confidential Business Information</b> protected by civil (CA) & criminal (US) law.
<b>Examples</b>	Client lists, Formulas, Recipes, IC designs, Business plans, Sales strategies, Lab notes
<b>Criteria</b>	<b>Valuable &amp; Secured</b> (document thoroughly if item is a complex article of manufacture)
<b>Costs</b>	Locks, Notices of Confidentiality, Not telling anyone, encryption, Security Procedures.
<b>Duration</b>	Legally protected <b>as long as not in public</b> domain & reasonable <b>efforts</b> to keep secret



## Trade Secrets – Theory

- **Information** used in a **business**, not generally known, of some economic **value**, and maintained in **secrecy**
- Rights protected only if reasonable **steps** taken to **ensure confidentiality** with **no casual disclosures** (require NDA before disclosing)
-  Canada - Protected by **common law** = **civil** action = breach of confidence, contract law
-  U.S. - Protected by **proprietary** right = **criminal** action = felony, may recover losses



## Trade Secrets – Application

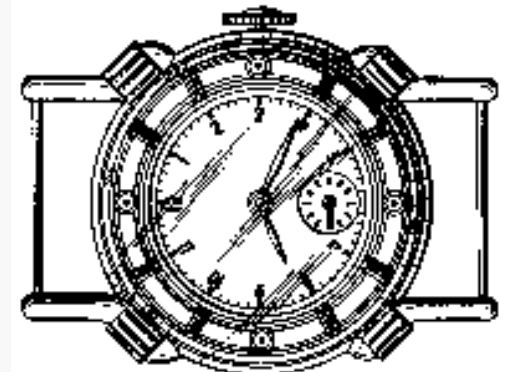
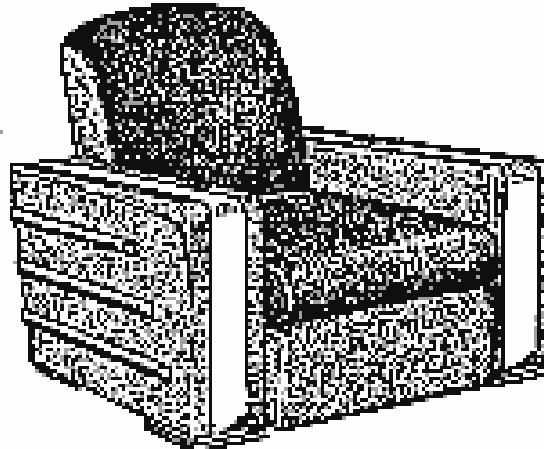


- Always use **Non-disclosure Agreements** when possible
- **Identify** valuable secrets, enact policies to **secure** from unauthorized access or disclosure
- **No Publication** or **Public disclosures**
- **Grace period** allows creators to file patent application within year if idea disclosed by someone else (not all countries)
- **Disadvantage** – No way to know if idea is **infringing** on someone else's idea without a thorough **search**
- **Advantages** – indefinite protection, in any country, with no processing delay or fees due, ever.



## Patents (Design) – Examples

- **Visual / ornamental characteristics** embodied in, or applied to, an **article of manufacture**
- Sometimes used when **patent unavailable**
- Invention Market Scams – **design is not utility**





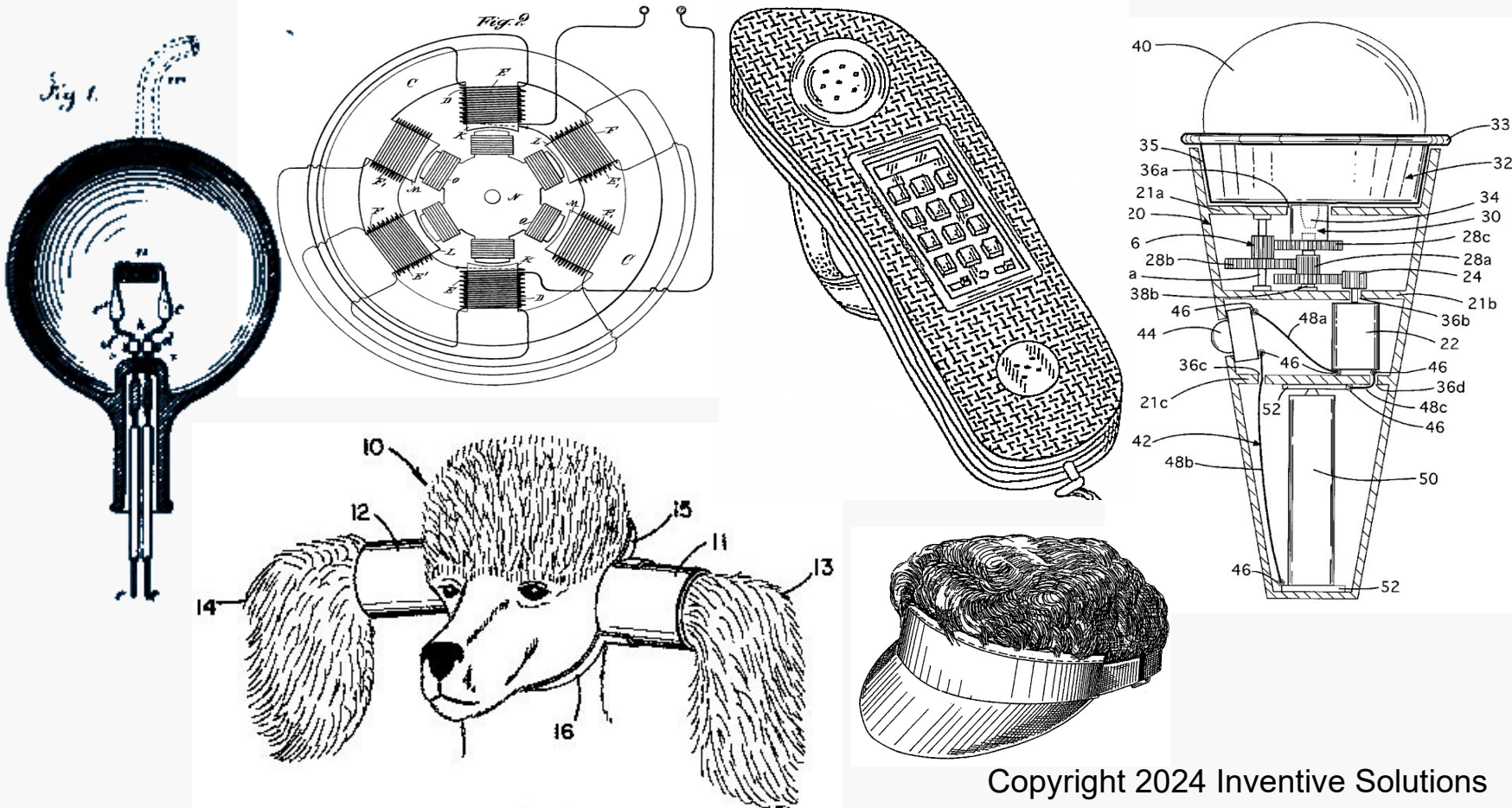
## Patents (Design) – Basic Info



<b>Definition</b>	Exclusive right to make, import, rent, or sell the <b>aesthetic qualities</b> of a functional article
<b>Examples</b>	Statue of Liberty, Coke bottle, office chair, architecture, automobile, airplane, spoon
<b>Criteria</b>	novel features of <b>shape, configuration, pattern or ornament</b> of finished article
<b>Costs</b>	CA\$567 [Filing>Issue]; CA\$496 [Maint. Fee]* US\$415>1660:[Filing>Search>Exam>Issue]
<b>Duration</b>	<b>10-15 yrs (CA) or 15 yrs (US)</b> (*Due by end of 5th year from registration)



## Patents – Overview







## Patents (Utility) – Basic Info



<b>Definition</b>	Exclusive right to <b>manufacture, use, or sell</b> a specific <b>product or process</b>
<b>Examples</b>	Machines, mechanical devices, methods of manufacture, matter, software algorithms
<b>Criteria</b>	<b>New</b> (1 <sup>st</sup> in world), <b>Useful</b> (workable), and <b>Non-obvious</b> (to anyone skilled in field)
<b>Fees</b>	CA\$504>1248 [Apply>Exam>Final] US\$680>2495[Filing>Search>Exam>Issue]
<b>Duration</b>	~ <b>20 years</b> only as long as owner pays incrementally increasing maintenance fees



## Patents - Basic Concepts



- a **discovery** (idea) cannot be patented, only an **invention** (its physical manifestation; implementation)
- government **certifies the origin** of an invention; **enables** owner's exclusive **rights** to be **protected**
- equivalent to **registering** a property deed/title
- limited **monopoly** creates **incentive** to innovate
- registering is **cost** of proving/keeping **ownership**
- 90% are **improvements** to existing inventions



## Patents – Front Page

- Title
- Inventor
- Number
- Date
- Classes
- Prior Art
- Abstract
- Drawing



US005115996A

**United States Patent** [19]  
**Moller**

[11] **Patent Number:** **5,115,996**  
[45] **Date of Patent:** **May 26, 1992**

[54] **VTOL AIRCRAFT**  
[75] **Inventor:** Paul S. Moller, Dixon, Calif.  
[73] **Assignee:** Moller International, Inc., Davis, Calif.  
[21] **Appl. No.:** 472,696  
[22] **Filed:** Jan. 31, 1990  
[51] **Int. Cl.<sup>5</sup>** ..... B64C 29/00  
[52] **U.S. Cl.** ..... 244/12.5; 244/23 D;  
244/52; 239/265.19; 239/265.27; 239/265.25  
[58] **Field of Search** ..... 244/12.5, 23 D, 2, 23 R,  
244/23 A, 52, 219; 415/148, 150, 167;  
239/265.13, 265.19, 265.25, 265.27, 265.29,  
265.31

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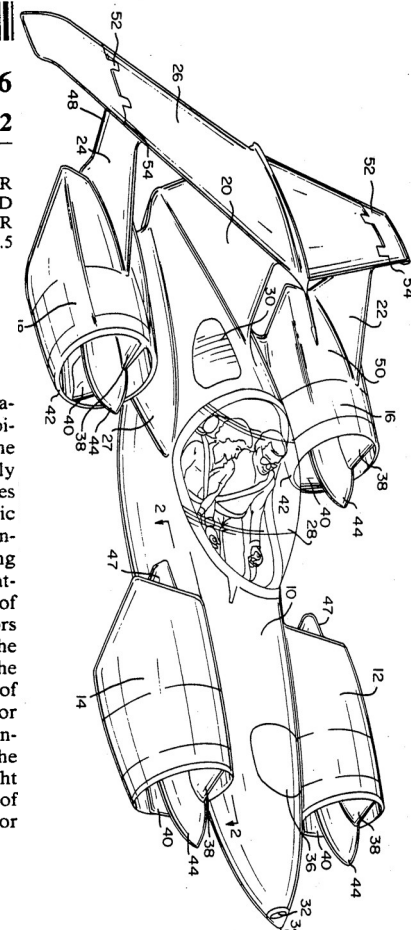
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2054536 5/1972 Fed. Rep. of Germany ... 244/23 D  
1281653 12/1961 France ..... 244/23 R  
1136331 12/1968 United Kingdom ..... 244/12.5

*Primary Examiner*—Joseph F. Peters, Jr.  
*Assistant Examiner*—Anne E. Bidwell  
*Attorney, Agent, or Firm*—Rosenblum, Parish & Bacigalupi

[57] **ABSTRACT**

A VTOL aircraft including a fuselage with four nacelles, three vertical stabilizers and a horizontal stabilizer attached to the fuselage. The fuselage and the nacelles are lifting bodies that are configured to jointly form an aerodynamic lifting body which cooperates with the horizontal stabilizer to provide aerodynamic lift to the aircraft in forward flight. Each nacelle contains two rotary engines directly driving corresponding fans which face each other and operate in counter-rotating directions. Each nacelle also contains a system of vanes located at the rear opening thereof, and actuators for extending and retracting the vanes to deflect the airflow over a predetermined range of angles from the horizontal. Each engine utilizes the dynamic pressure of the air behind the fans to provide a source of air for cooling the rotors and exhaust system. A triple redundant computerized flight control system maintains the stability of the aircraft as it transitions from one flight regime to another as well as in flight. The system of vanes alone can also be used as an apparatus for gas or fluid stream directional control.



38 Claims, 15 Drawing Sheets



## Patents (Utility) – Details



- Front Page
- Background
- Summary
- Description
- Drawings
- Claims

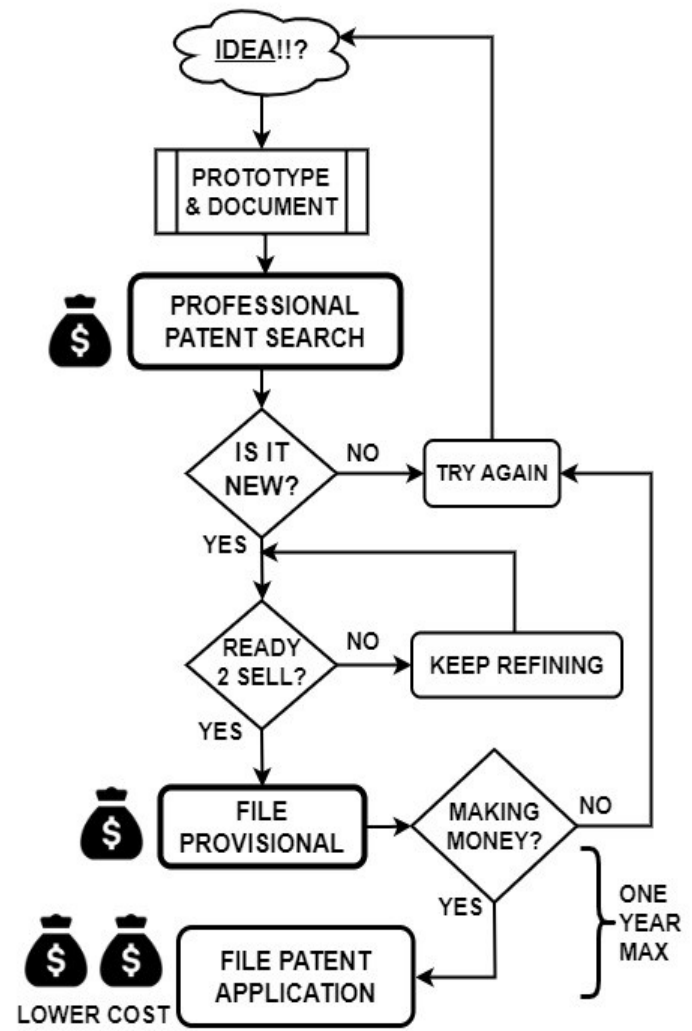
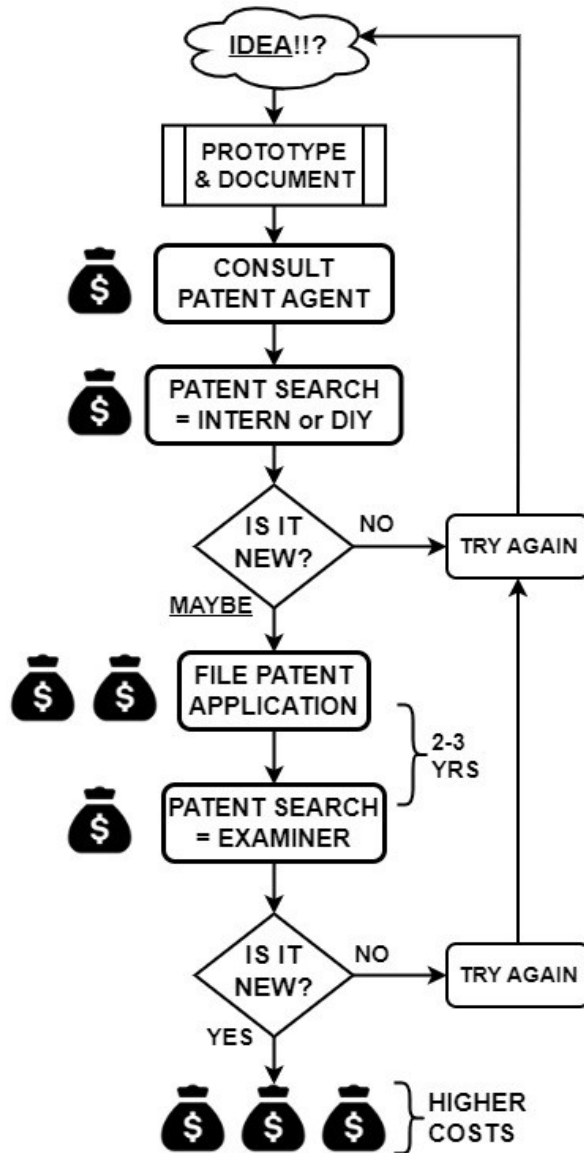




## Prior Art Searches – Basics



- **Prior Art** = All **relevant** patents or disclosures
- Lawyers must **declare & avoid** relevant patents
- Inventors **experts** on their idea, not on **searches**
- Not all patents result in **profitable** products
- Patents **expire** = in public domain: unpatentable
- Applications not **published** till 18 mths from filing
- Should be done by objective **experienced** 3<sup>rd</sup> pty





## Provisional Application (for Patent)

<b>Definition</b>	Affordable <b>pre-patent method</b> to establish priority (US, PCT) & <b>patent pending</b> status
<b>Examples</b>	<b>Protects disclosure</b> while testing market & showing to manufacturers, VC's, Investors...
<b>Criteria</b>	As <b>detailed as utility</b> application; but usually excludes formal claims. (legal part of patent)
<b>Costs</b>	<b>US\$70&gt;280</b> : Filing fee: cost depends on <b>entity status</b> of inventor/company applying
<b>Duration</b>	<b>Must apply for 'utility' before <u>1 year</u> or risk losing rights forever (if public disclosure)</b>



## Provisionals – Considerations



- Filed up to **one year** following the date of first **sale** or **offer**, public **use** or **publication** – or when **idea ready...**
- **Filing & disclosure** may **bar** patent = some countries
- **Placeholder** for utility patent: **No examination/publicat.**
- If patent **not filed** & idea **disclosed**, **no patent** allowed
- Complete **description** & relevant **drawings** required





## Provisionals – Advantages

- Provisional **specification** is bulk of patent **application**
- **Affordable** for startups, save \$\$ for manufacturing, etc.
- Time to **refine** product, test **market** & raise \$\$\$
- Can be used as **basis** for **PCT** (Intl.) application
- **Additional filings** OK if product improvements needed
- Confers **patent pending status** while disclosing
- **Better protection** than NDA when **disclosure** needed

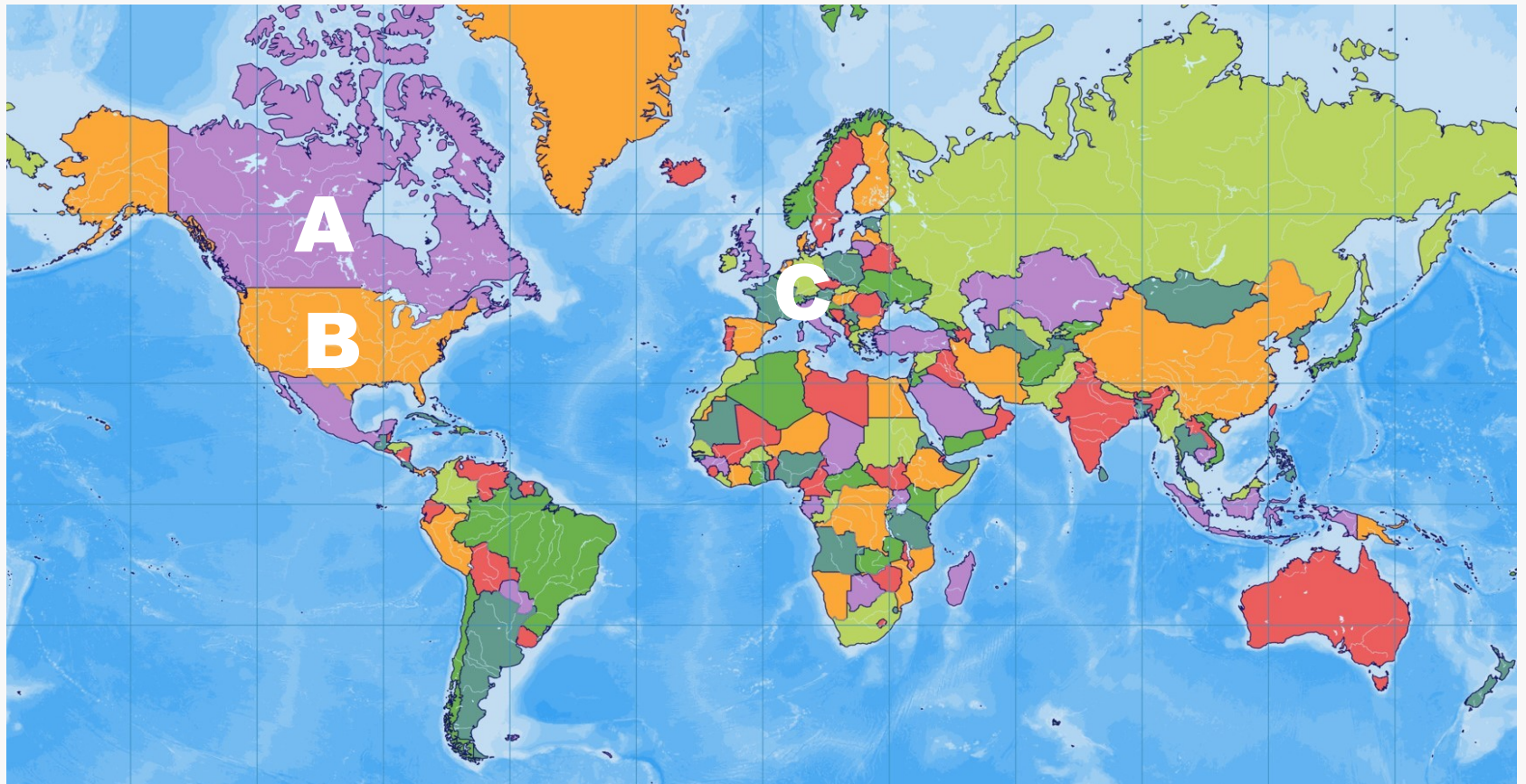


## International Applications

- Patent Cooperation Treaty (PCT) allows **multiple** country filings with only **one standard application**
- More **cost effective** than filing in each country
- Can be **filed** in any of ~150 Paris Convention states
- **Delays** local filing/publication 30 mths from priority
- Includes **International Search Report (ISR)**
- National **examinations** can be **delayed** (incl. fees)
- **Provisional Application** can be used as **basis** to file



## Path of an International Application





## Patents – Basic Process

- Prior Art **Search** to determine **novelty** (hours)
- **Provisional** or Utility **Patent** Application (tens of hrs)
- **Drawings** & file **Provisional** (hours)      **INVENTOR** or **I.P. Service**
- **Claims** & file patent **application**      **Lawyer > PATENT OFFICE**
- Pay fees to **search** & **examination** for patentability
- All examiner **objections** resolved (hopefully)
- Patent **allowed** & final issue fees paid
- **Certificate** issued (process takes 2-3 years, if lucky)



## Patents – Risks Without

- If idea **stolen** = **difficult/costly** to **recover** ownership
- No **examination** = **infringement risk** is not known
- No IP **ownership** = no **property** to **licence**
- No IP **ownership** = no **assets** or interested **investors**
- No IP **ownership** = no way to prevent **imports** of copies
- If **infringing** = must **stop selling**, refund \$, **pay** royalties



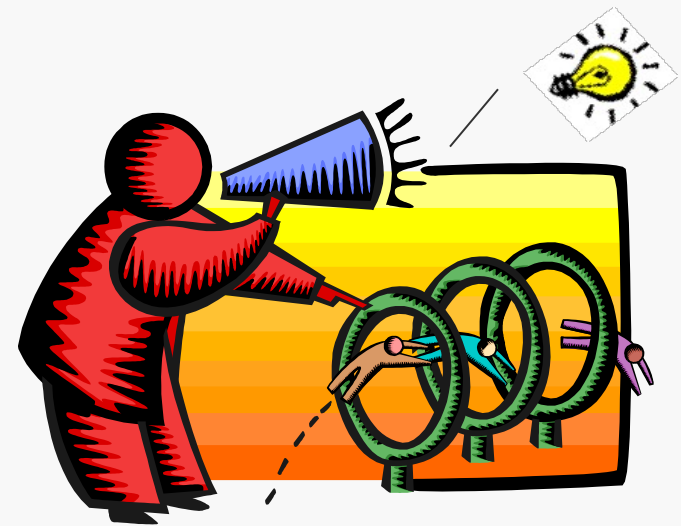
## Patents – Benefits With

- Burglar **alarm** to infringers & **roadblock** to importers
- **Lowers risk** of infringement & litigation
- Gold standard for **investors** (Venture Capital)
- Can be **licensed** to manufacturers for **royalties**
- May be used as **asset** to negotiate more **funding**
- Creates greater **certainty** about IP **ownership**



## Affordable Patent & Research Services

- >20 years: **Provisionals**, Drawings, **Searches**
- **Certified** US Patent Paralegal & Technologist
- Free **confidential** consultation
- **Non-disclosure** protection
- **Affordable** rates
- Bulletproof IP



Thank You