

Patent Basics for the Aerospace Industry

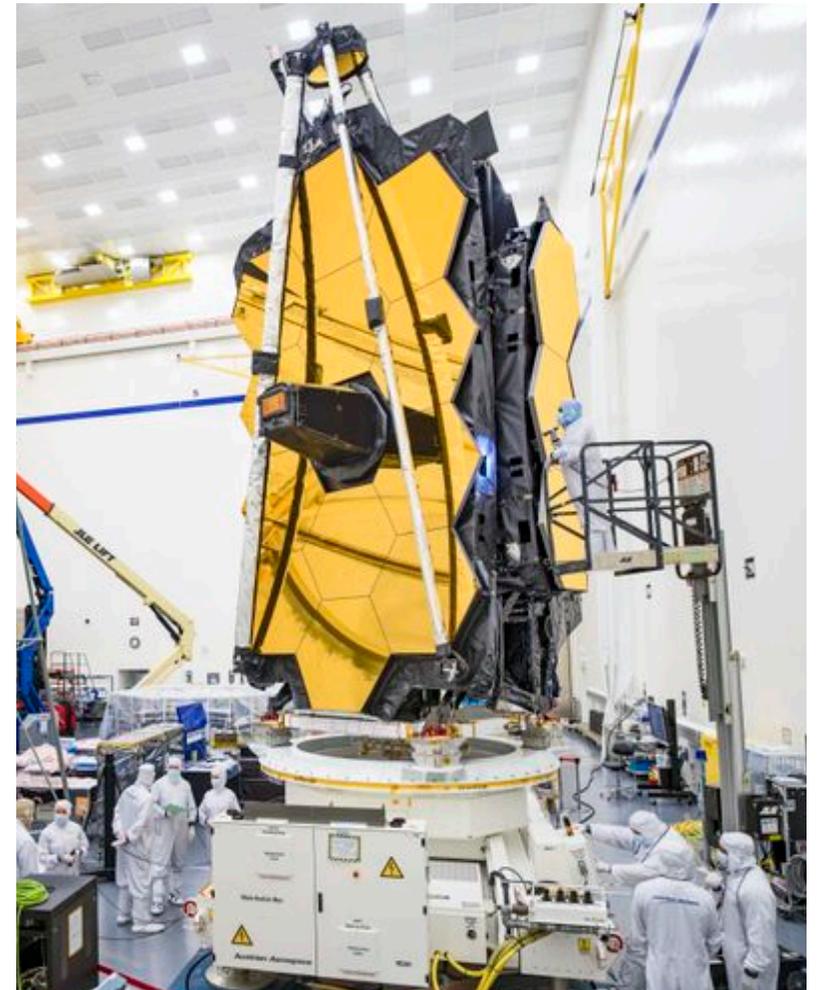
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Tom Cowan, Patent Attorney at
Knobbe Martens

Presented for Space Foundation Space
Commerce Workshop at Aerospace
Corp. (El Segundo, CA)

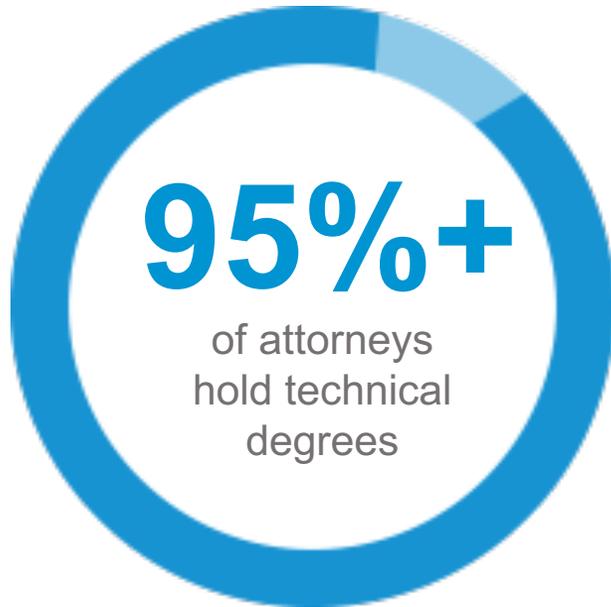
My Background in Aerospace Engineering

- Former aerospace engineer
 - Northrop Grumman
 - NASA Armstrong
 - Univ. of Florida



<https://news.northropgrumman.com/news/releases/northrop-grumman-completes-next-critical-launch-milestones-of-nasas-james-webb-space-telescope-spacecraft>

Firm Profile – By the Numbers



Global Practice



through large network of
Foreign Associates



Offices Nationwide

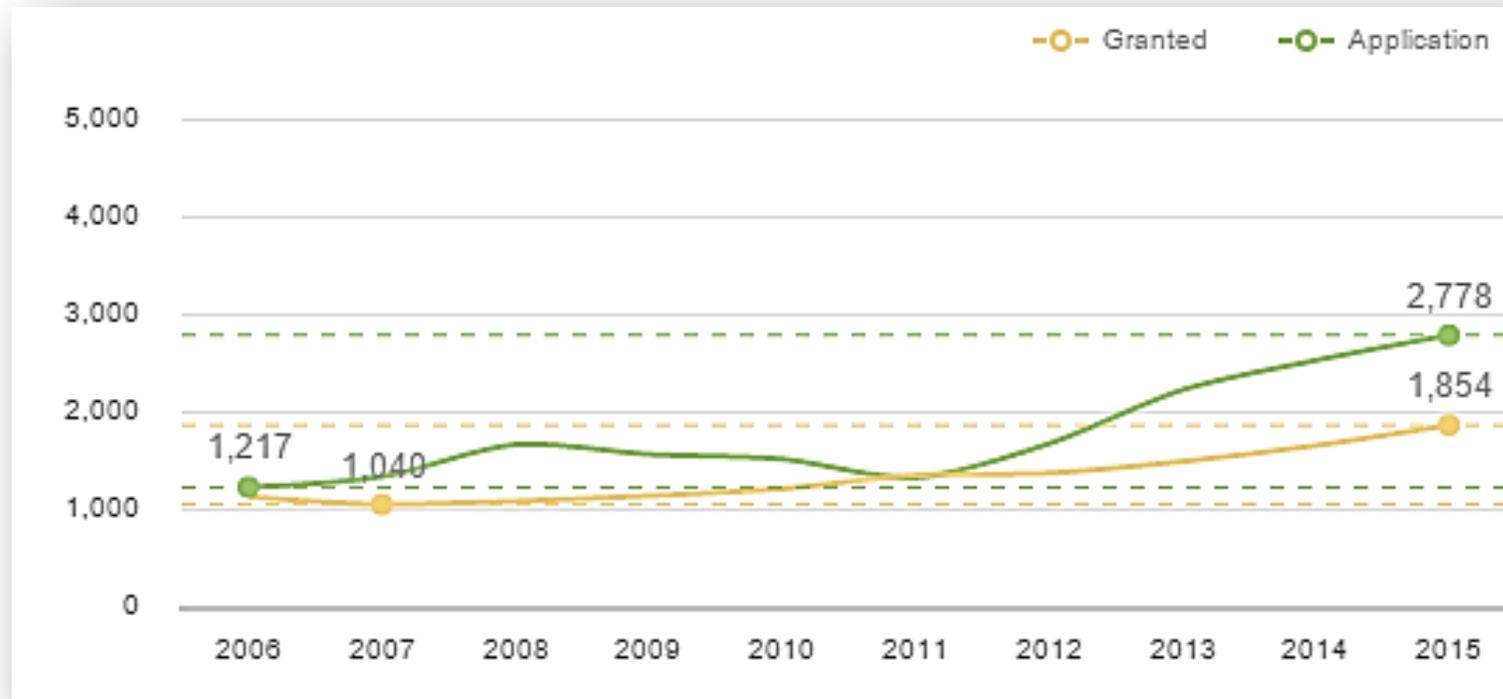
Orange County
Los Angeles
New York
San Diego
San Francisco
Seattle
Washington D.C.

200 Highest number of registered
patent attorneys in the US
practicing across a **vast array** of industries

250+ lawyers &
scientists

All our attorneys are **focused only on IP law**
as opposed to general practice firms that have smaller IP departments

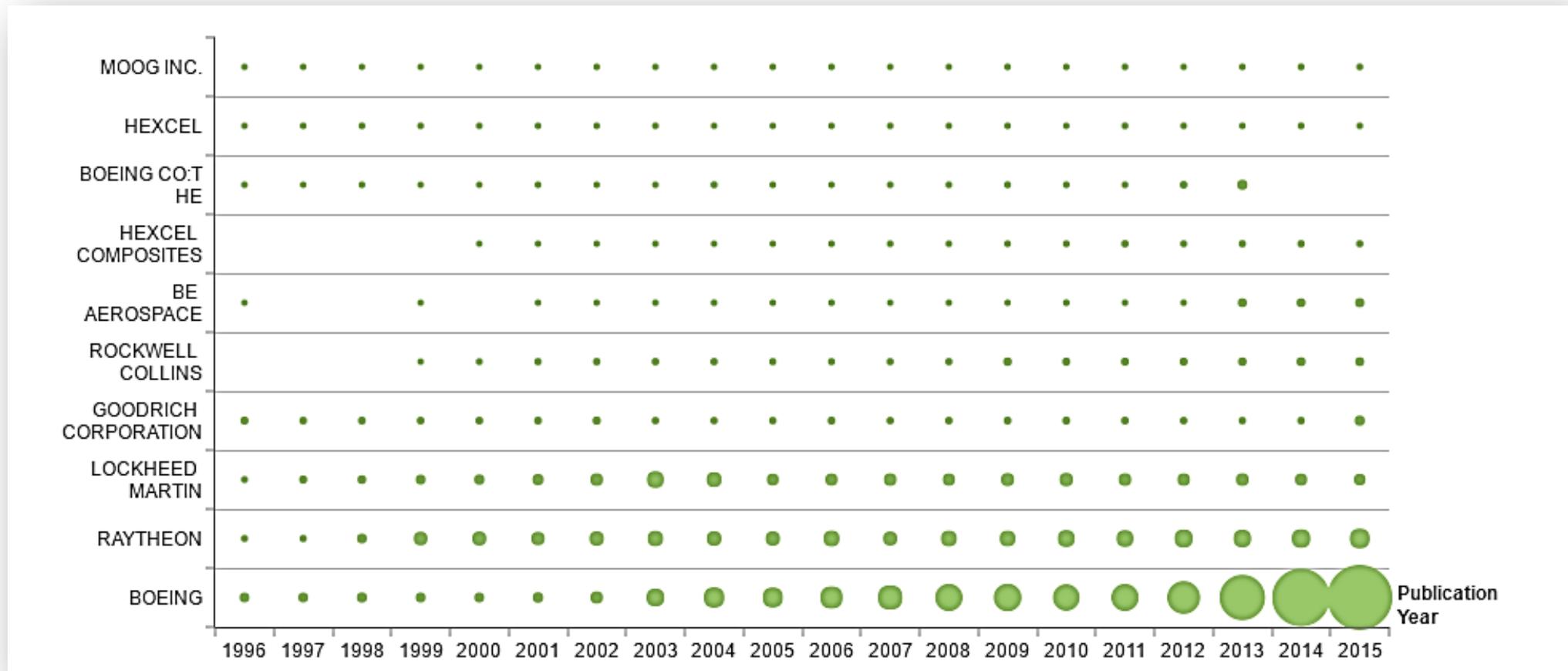
Patents Overview - Aerospace & Defense



<https://www.patsnap.com/resources/industry-innovation-reports/aerospace-defence>

- The major manufacturers in aerospace and defense have about 30K patents and 30K applications (according to patsnap.com)
- Key markets are U.S. and Europe

Top Aerospace Companies in Patents



“top companies in this industry based on their patent output” – patsnap.com

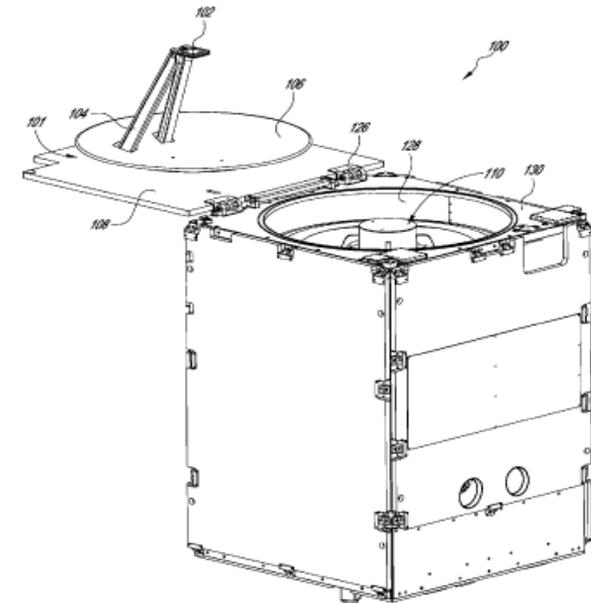
SAMPLE TECHNOLOGIES

- Satellites
- Aircraft
- Lighter Than Air Systems
- Propulsion

SAMPLE FORMER CLIENT

- Skybox Imaging
 - Acquired by Google for \$500M
 - Now Terra Bella, part of Planet (formerly Planet Labs)

(19) United States	
(12) Patent Application Publication	(10) Pub. No.: US 2012/0154585 A1
Miranda	(43) Pub. Date: Jun. 21, 2012
(54) INTEGRATED ANTENNA SYSTEM FOR IMAGING MICROSATELLITES	Publication Classification
(75) Inventor: Henrique do Carmo Miranda, Stanford, CA (US)	(51) Int. Cl. <i>H04N 7/18</i> (2006.01) <i>G06F 17/50</i> (2006.01)
(73) Assignee: SKYBOX IMAGING, INC., Mountain View, CA (US)	(52) U.S. Cl. 348/144; 703/1; 348/E07.085
(21) Appl. No.: 13/326,175	(57) ABSTRACT
(22) Filed: Dec. 14, 2011	Examples of imaging microsattellites are described that have an imaging system and antenna system disposed within the microsattellite body when the microsattellite is in a non-deployed state. The properties of the antenna system can be adjusted such that the antenna system does not impact, contact, or displace the imaging system when the microsattellite is in the non-deployed state. The properties of the antenna system can be adjusted such that the antenna system does not contact or impact the body of the microsattellite or any other structure when the microsattellite transitions to a deployed state. The antenna system can be configured to achieve a desired gain and/or data transmission rate by adjusting properties of the antenna system based on the radiation pattern of an antenna feed and geometric constraints imposed by the imaging system. Examples of methods for designing such imaging microsattellites are provided.
	Related U.S. Application Data
(60) Provisional application No. 61/423,473, filed on Dec. 15, 2010.	



Why get a Patent?

- Market Exclusivity
- Company Value
- Revenue
- Legal Protection
- Attracts Investors

Patent Strategy – 3 Big Issues

- Do you own it?
 - In U.S., inventors are default owners
 - Assign to the company
- Can you protect it?
 - Eligibility AND patentability
 - Strength of portfolio
- Do you have freedom to practice it?
 - Risk of infringing others' patents

Prior Art Searching

- Searching may help with patentability and avoiding infringement
- Types of Searches
 - DIY
 - Professional searching



Types of Patents

- Utility – systems, methods, software, etc.
- Design – ornamental aspects

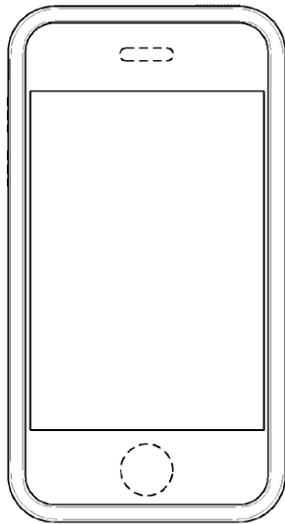


FIG. 11

U.S. Des. No. D593,087

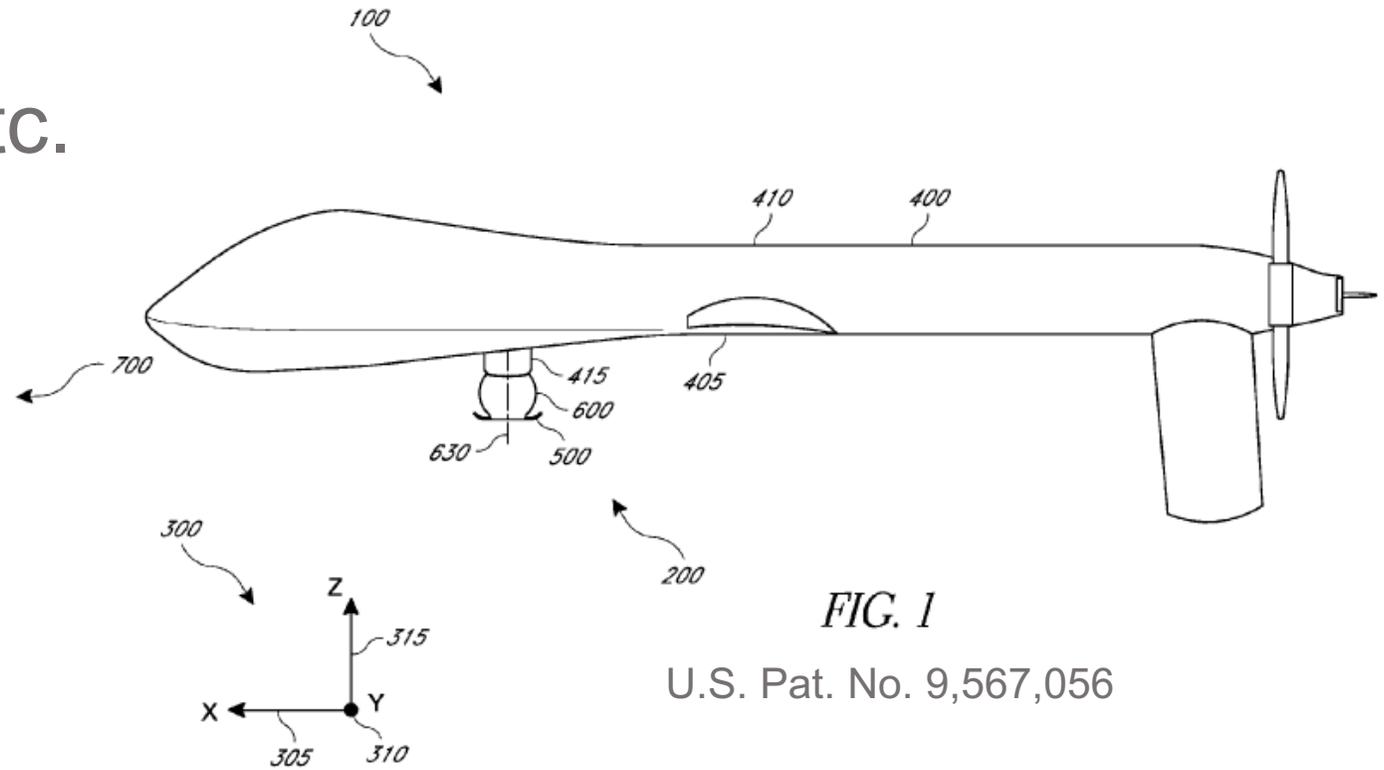


FIG. 1

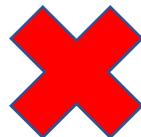
U.S. Pat. No. 9,567,056

What Rights Does a U.S. Patent Grant?

- Right to *exclude* others from practicing the invention (20 years)
- Does NOT provide the right to practice invention



“RIGHT TO PRACTICE”
WITHIN BOUNDARY



VS.



RIGHT TO EXCLUDE FROM
WITHIN BOUNDARY

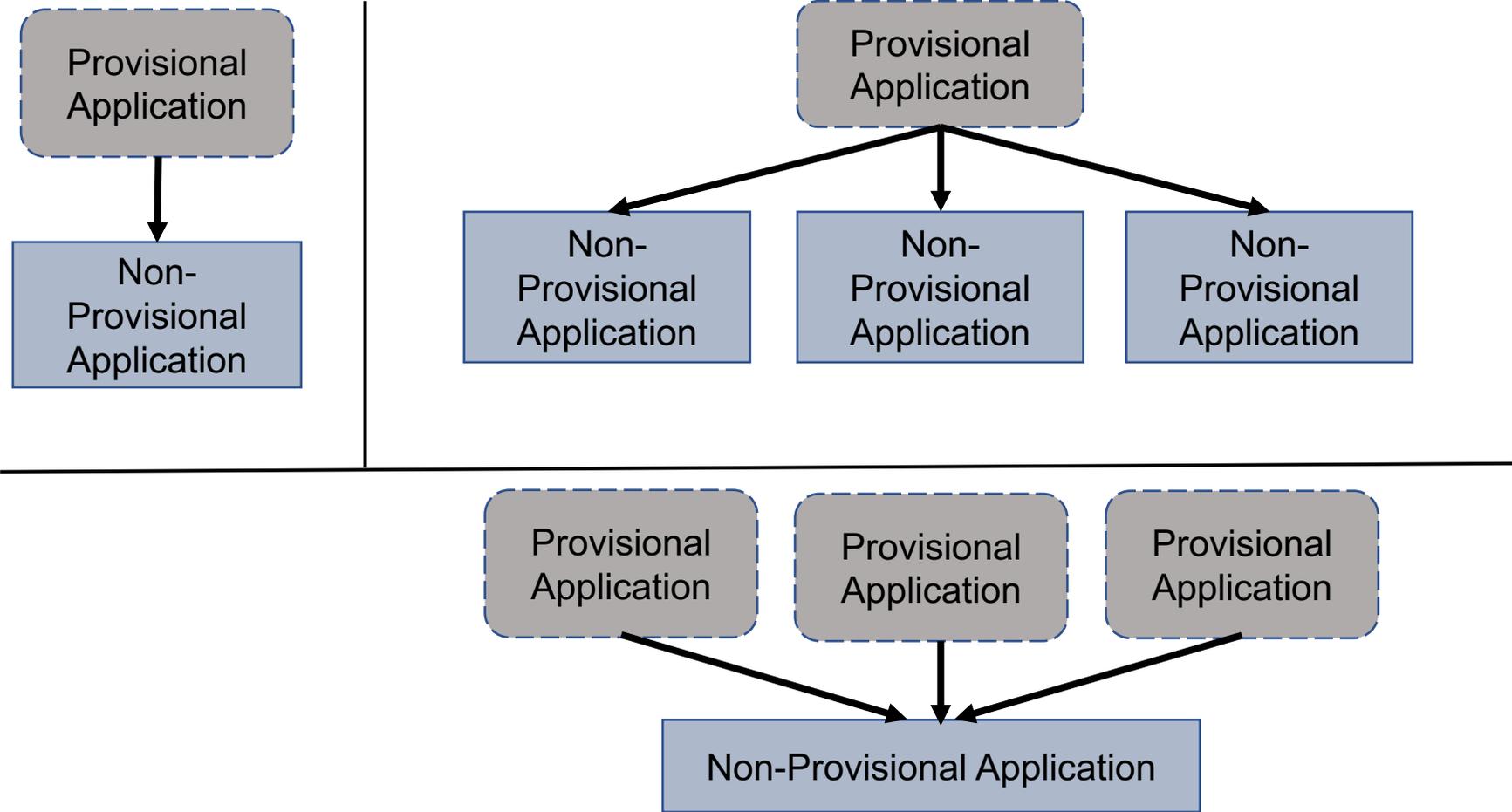


Basic Legal Requirements for U.S. Utility Patents

- Eligibility
 - Not eligible: abstract ideas, laws of nature, natural phenomena
 - Recent scrutiny of eligibility: Biotech, Software & Business Methods
- Patentability
 - (1) useful,
 - (2) novel, and
 - (3) non-obvious

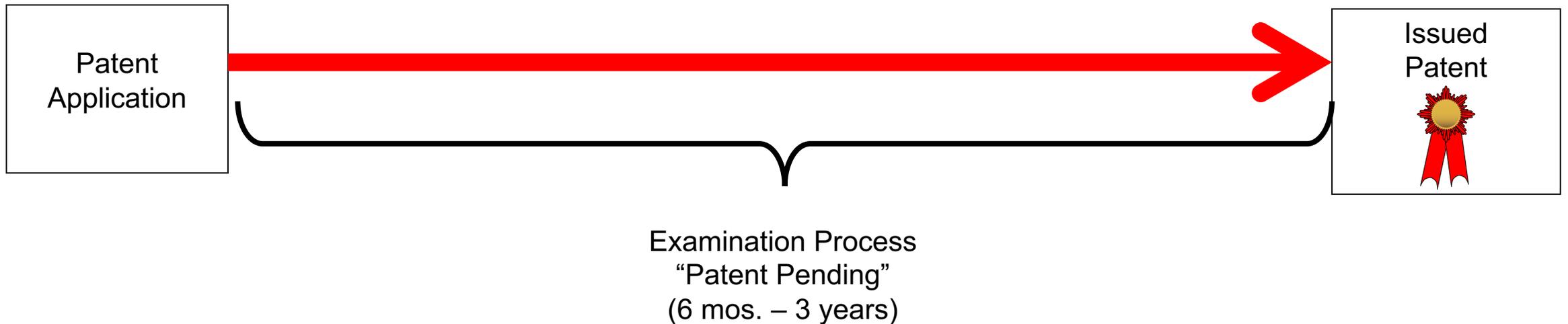
U.S. Provisional Application

12 months between provisional(s) and non-provisional(s)

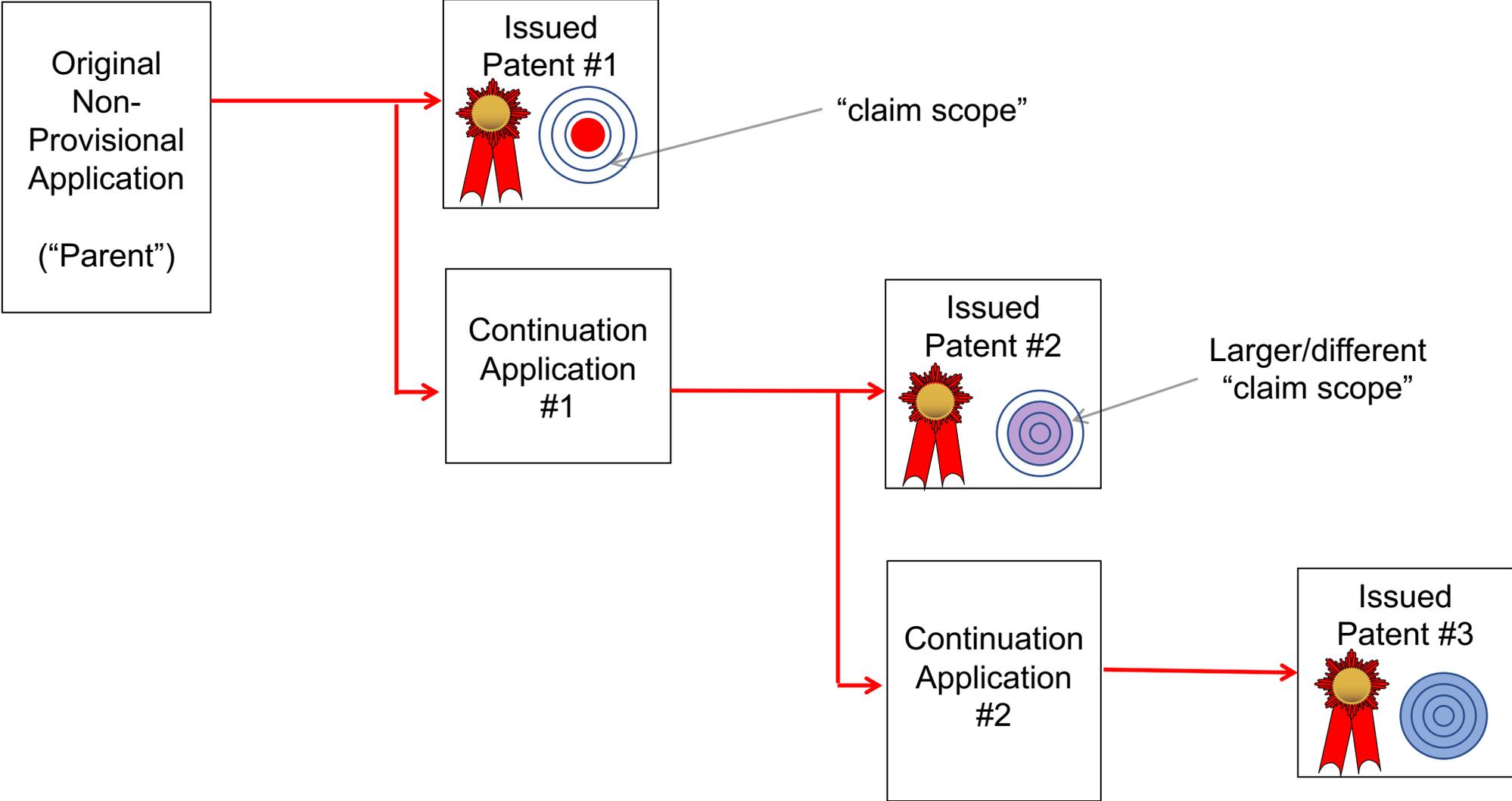


U.S. Non-Provisional Application

- Can claim priority to:
 - One or more provisional applications
 - Other pending non-provisional application(s)
- Examined: ~18-24 months
 - Priority Exam: ~6-12 months for \$\$\$



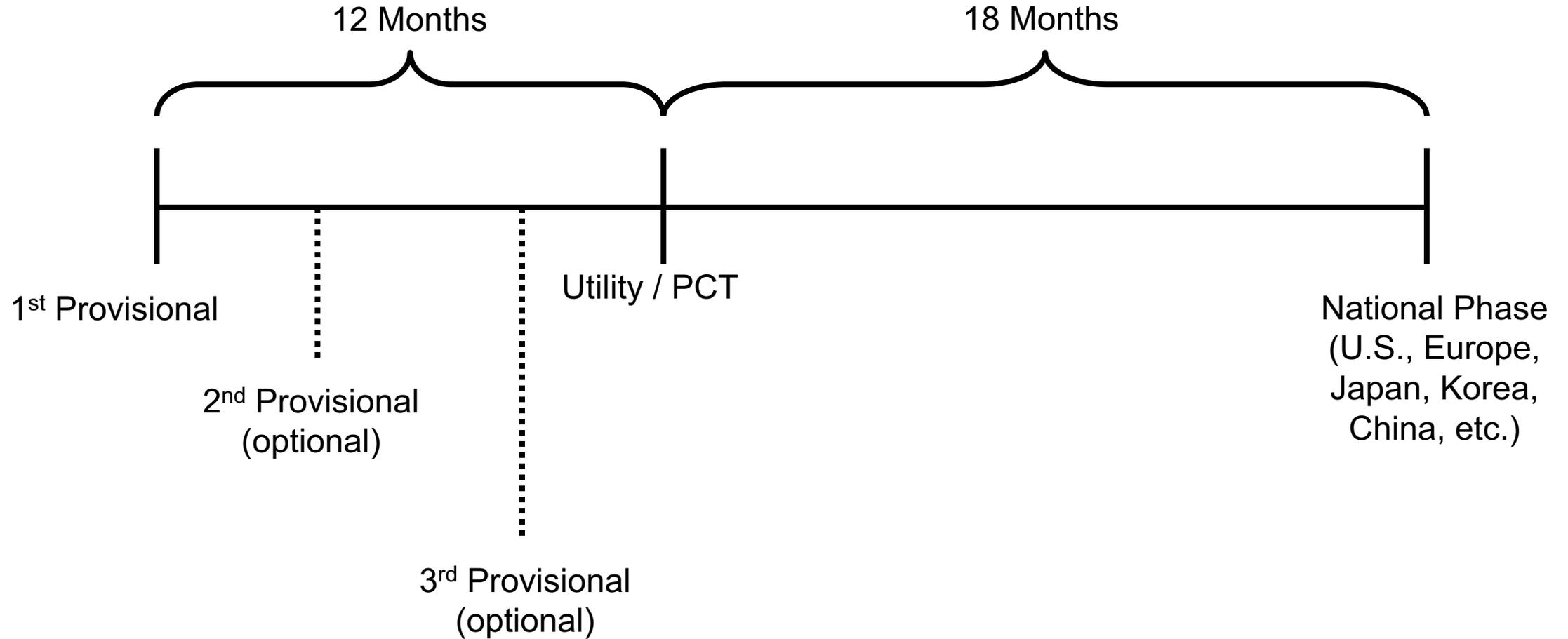
U.S. Continuation Applications



- Patent Cooperation Treaty (PCT) Application
 - 152 member countries
 - File within 12 months from priority application
 - Enter “National Phase” within 30 months of priority

Timeline for Filing

- Typical Filing Strategy



Patent Enforcement - Offense

- Cease and Desist Letters
- Patent Infringement Suits
 - Monetary Damages
 - Injunctions
- U.S. International Trade Commission Investigation

- Strict liability
- Consider “right to practice” search/analysis
 - 3X damages for “willful infringement”
- *Inter Partes* Review (IPR)

Disclaimers

- *This presentation constitutes an educational and informational presentation of general IP law and should not be construed as individualized legal advice or representation.*
- *The presentation of these materials does not establish an attorney-client relationship. Representation can be initiated only upon completion of our standard new client/new matter process, including completion of a conflicts check, execution of an engagement agreement and payment of any applicable retainer.*

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