
SUNY RF

Evaluation of the Opportunity - Patentability and Marketability Basics

Meet The Presenters

Lance Reich
Patent Attorney

Andrew Scheinman
BD & Licensing Professional

Overview

01. Who We Are & What We Do

02. Intellectual Property

03. Marketability

01. Who We Are & What We Do

What is SUNY RF, what is tech transfer and why is it important?

SUNY RF

Highlights

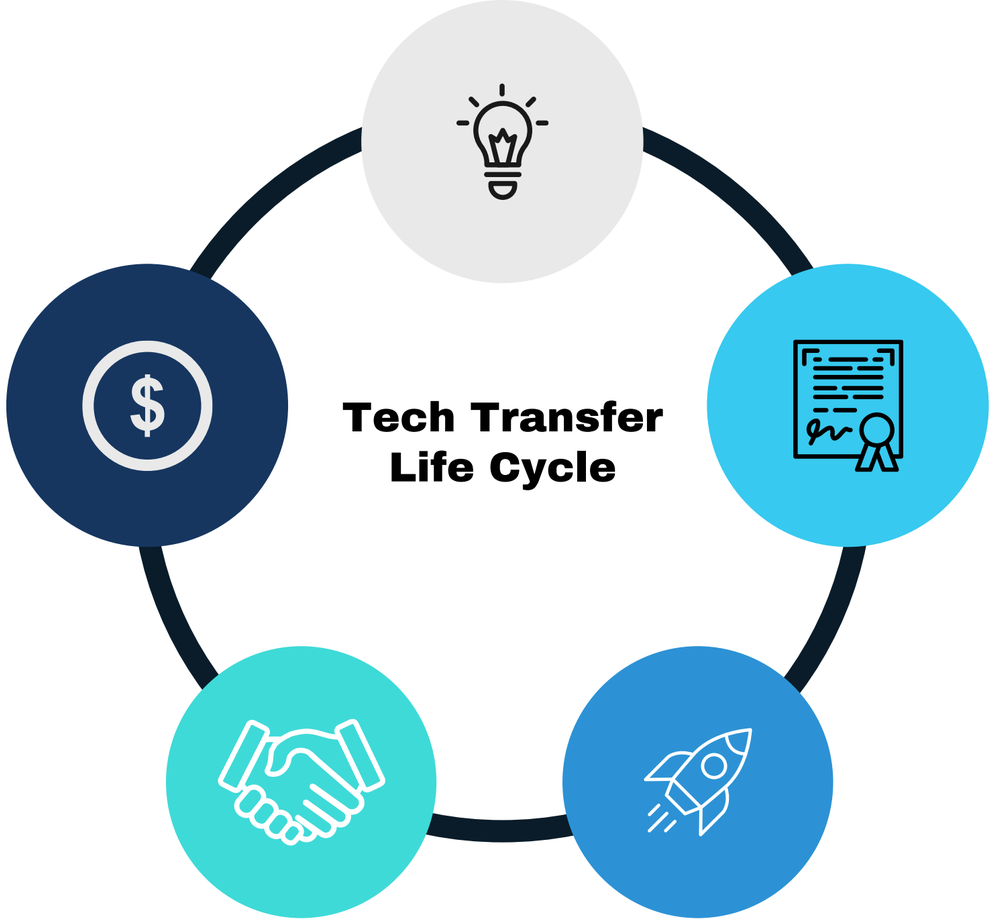
- Largest comprehensive university-connected research foundation in the country
- Provides central infrastructure of people, technology and processes:
  - administration of sponsored projects
  - transfer and sharing of intellectual property for public benefit and economic growth.
  - to write and submit grant proposals
  - establish contracts and manage funding awards
  - commercialize intellectual property

Tech Transfer

The process of transferring discoveries or innovations you develop from the university to the marketplace for public use.

Benefits of Tech Transfer

- Solve global issues
- Economic development
- Attribution and recognition
- Personal income through royalties
- Attract research funding



Conception & Disclosure

Marketing

Evaluation & Protection

Partnering

Asset Management

The SUNY RF Team

Matt Mroz

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Peter Taubkin

Meg Maier

Tanya Waite

Patrick Nelson

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Mahfuzur Miah

Andrew Scheinman

Jessica Stanley-Updyke

Joanne Lafrancois

Austin Winter

Ben Clark

Mark Bodner

Karl-Heinz Schofalvi

Doug Benel

Innovation and Partnerships

New Ventures

Marketing and Communications

Our Services

Evaluation

- Invention intake
- Patentability and marketability
- Customer discovery

Protection

- Patents and copyrights
- IP strategy and Management
- In-house patent counsel

Commercialization

- Marketing
- Licensing and Partnering
- SUNY Startups

2. Intellectual Property

Property that enjoys legal protection and stems from the exercise of the mind.

- created in the mind
- intangible
- ownership is a creation of law and public policy

Types of IP

Patents

Copyrights & Trademarks

copyright

all rights reserved

Trademark

TM

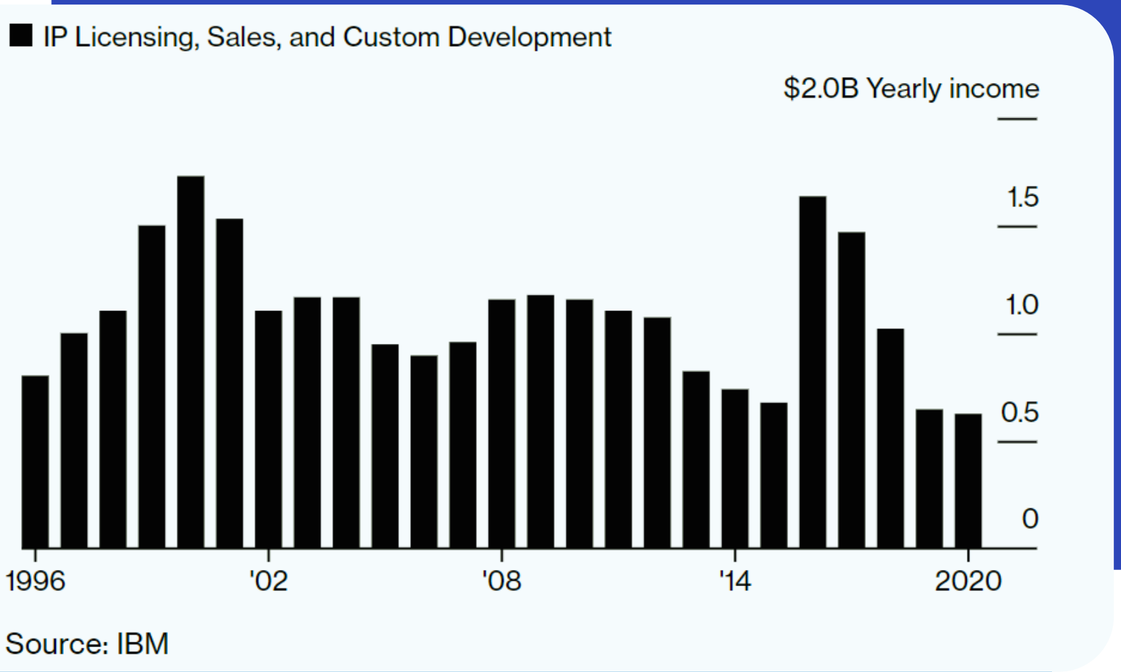
Registered Trademark

Know-How & Proprietary Info

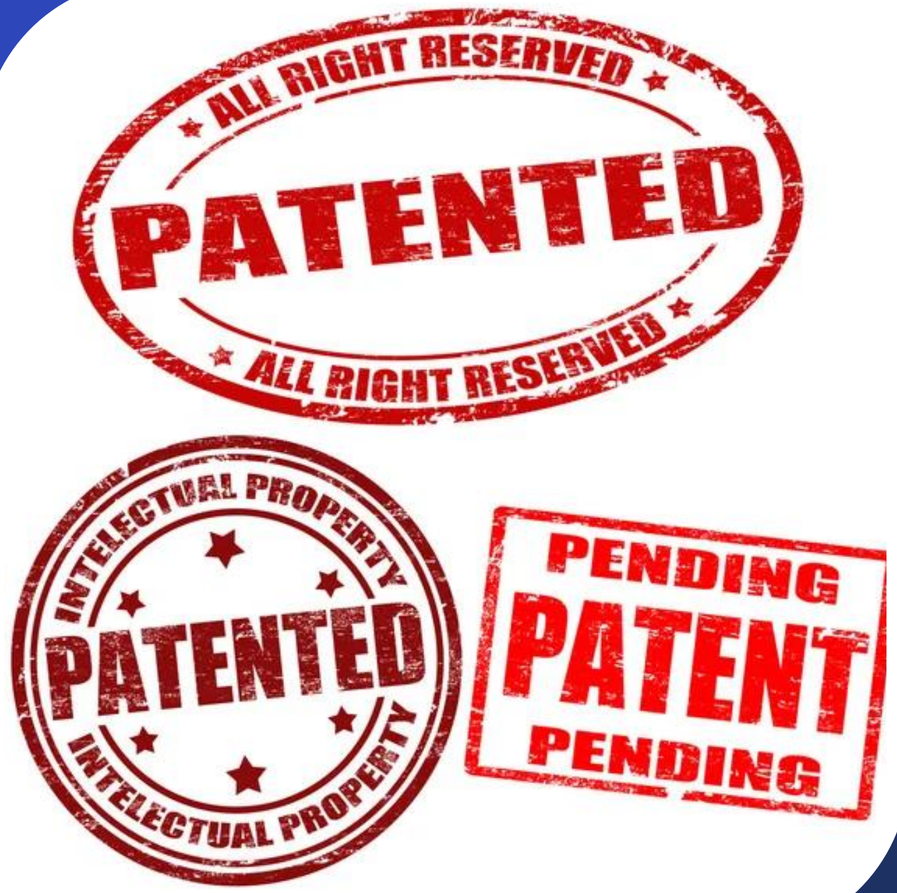
Why is IP important

- Creates property assets and adds value to a company from the minds of employees!
- Gives Businesses Exclusivity in the marketplace
- Marketing tool / Notice of ownership

Why is IP important



- Revenue Stream
  - Licensing to others - IBM $1.3B annually
- Finance: venture capitalists and banks want to see IP ownership



Patents

What are they, how do you get one, and why should you?

What is a patent?

- From WIPO:
  - "A patent is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem. To get a patent, technical information about the invention must be disclosed to the public in a patent application."

- A patent is a right granted to the patent owner by the government that permits that owner to **exclude others from making, selling or using the invention for a period of time**.

A patent gives the legal right:

To exclude others from making, selling or using the invention for a period of time.

Type Of Patents

3 Different Types of Patents

Design

Protects the design or exterior look of an invention.

Utility

Protects inventions such as machines, processes, or systems.

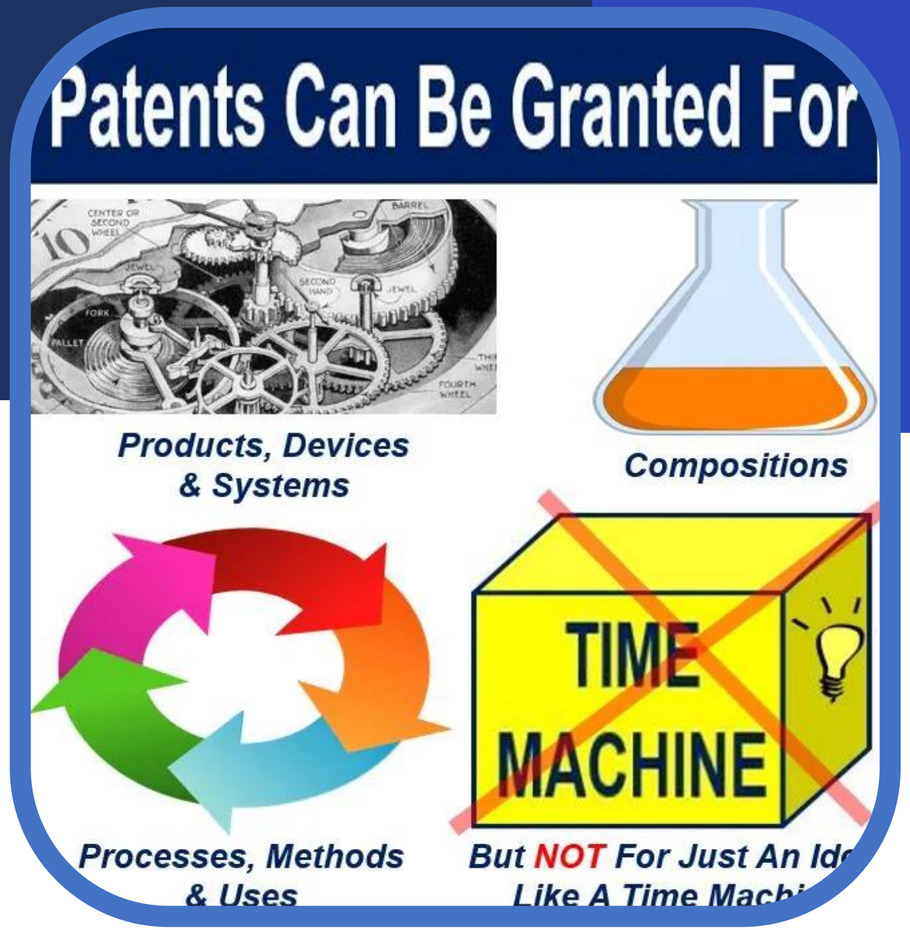
Plant

Protects the invention of new plant variants.

Can I patent it?

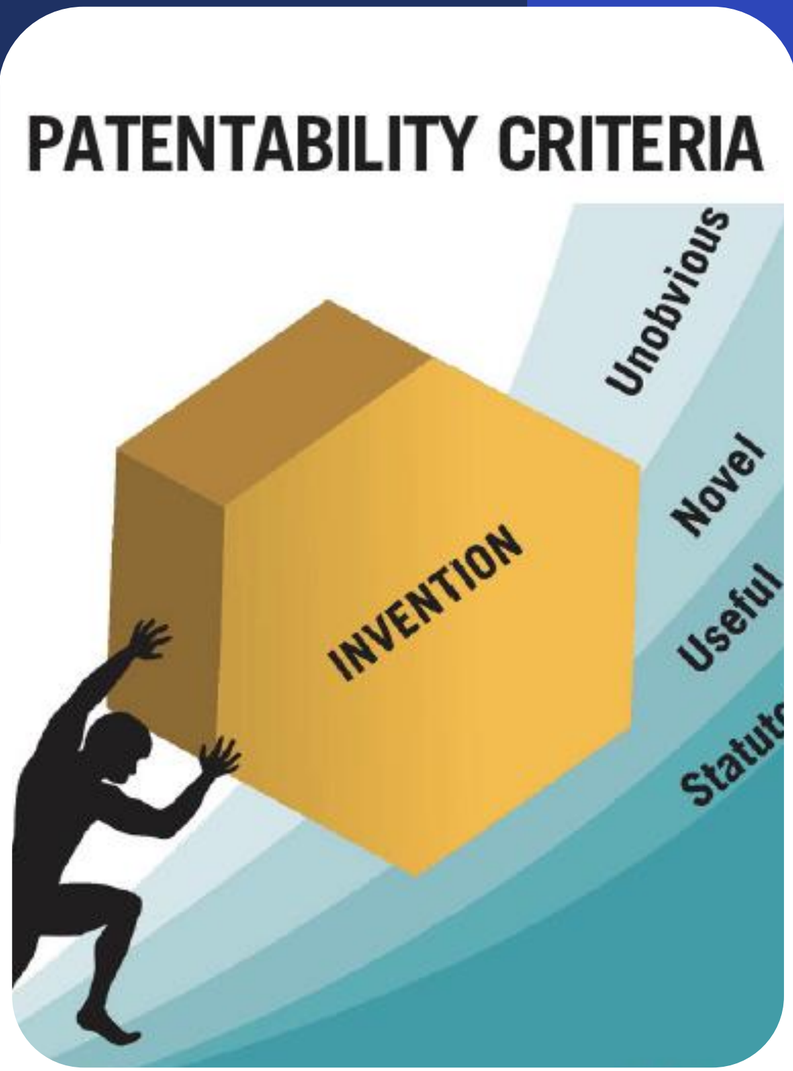
- What's patentable?
  - Compositions of matter
  - Machines
  - Articles of manufacture
  - Processes

- What's not patentable (exceptions)?
  - Abstract ideas
  - Products of nature
  - Natural phenomena



Patents and Public Disclosures

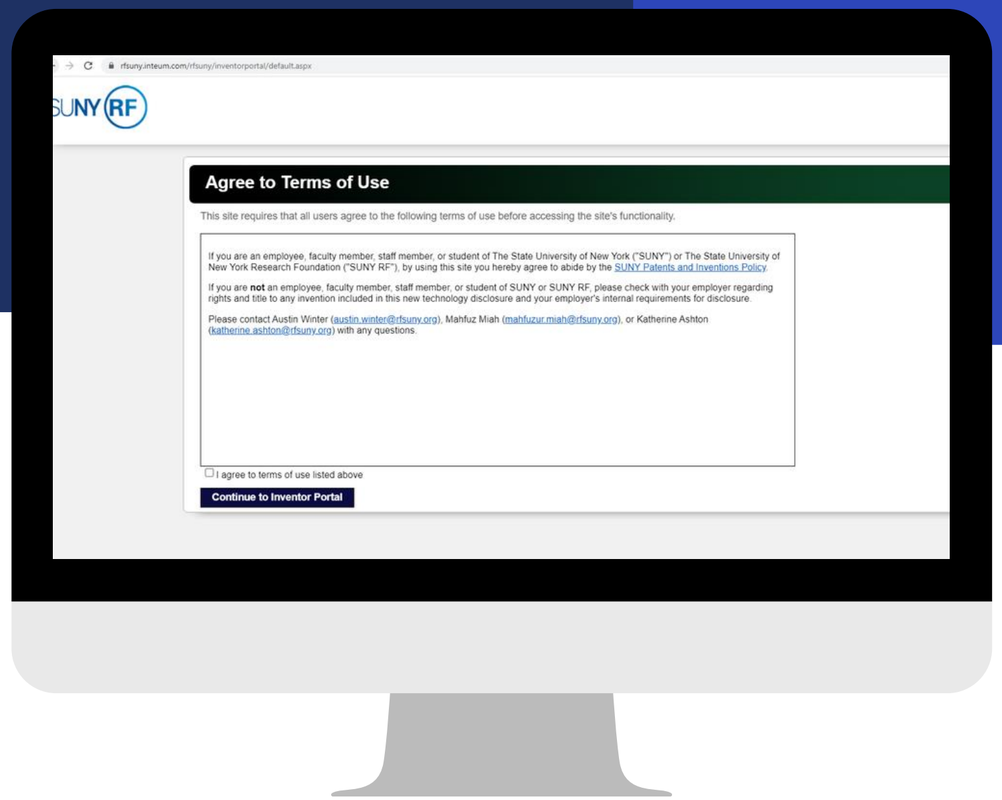
- To be patented inventions must be **novel and non-obvious**
- US has the benefit of a 1-year grace period however, most of the world = **absolute novelty bar**
- In nearly all other countries, as soon as an invention is disclosed, the inventor/applicant **loses their right to file a patent application**
- What constitutes a Public Disclosure?
  - Described in a publication or presentation, on sale, or available to public
  - Enables a skilled person to practice the invention



Key Take Away:

Disclose early,
Disclose often
(to your tech transfer office).

We are here to advise!



Quiz:

- ACME Company patents components A, B, C
- You patent component D – which relies on A, B, C
- Can you practice your invention including A, B, C, D?

Utility Patents

Term of 20 years from earliest filing date to… **exclude others** from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States

Starting the Patent Process

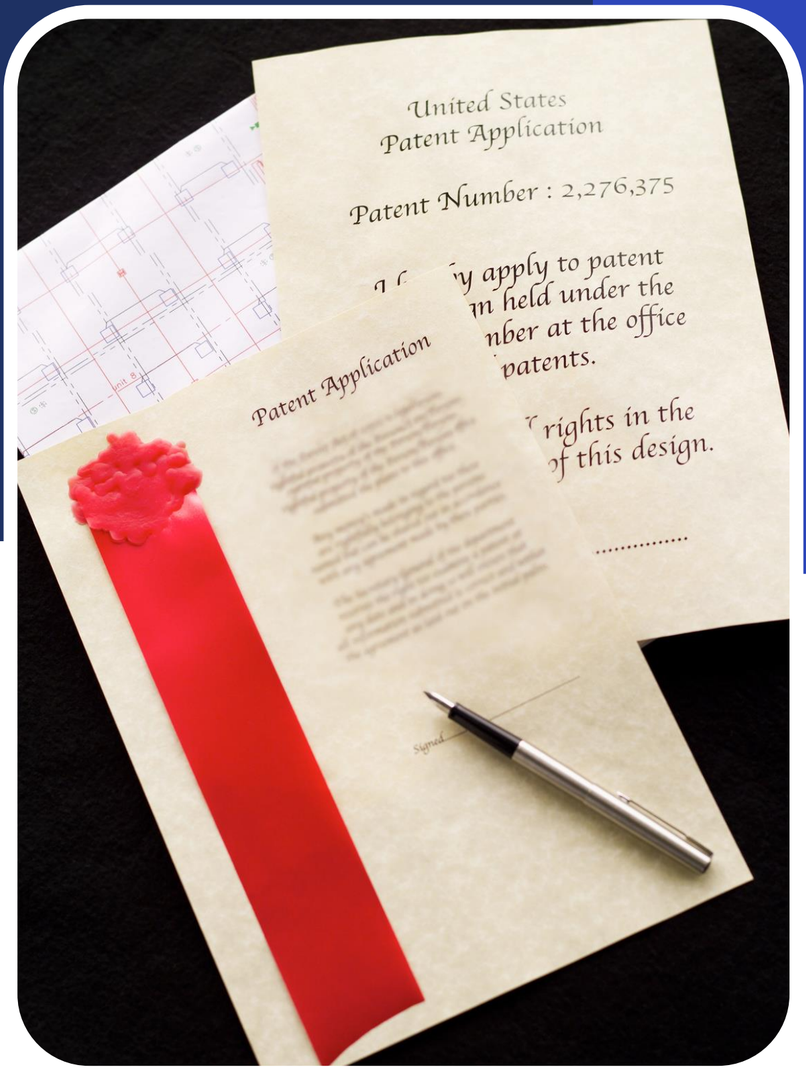
- In U.S., must file within a year of first public disclosure. If you want international rights, file before any public disclosure.

- You may file a provisional patent application, which gives you a “priority date” you can rely on for up to 1 year while you prepare your non-provisional application

- After provisional, two strategies:
  - If you only want a U.S. patent, file a regular patent application in the US Patent and Trademark Office (USPTO)
  - If you want US and foreign patents, file a Patent Cooperation Treaty (PCT) application

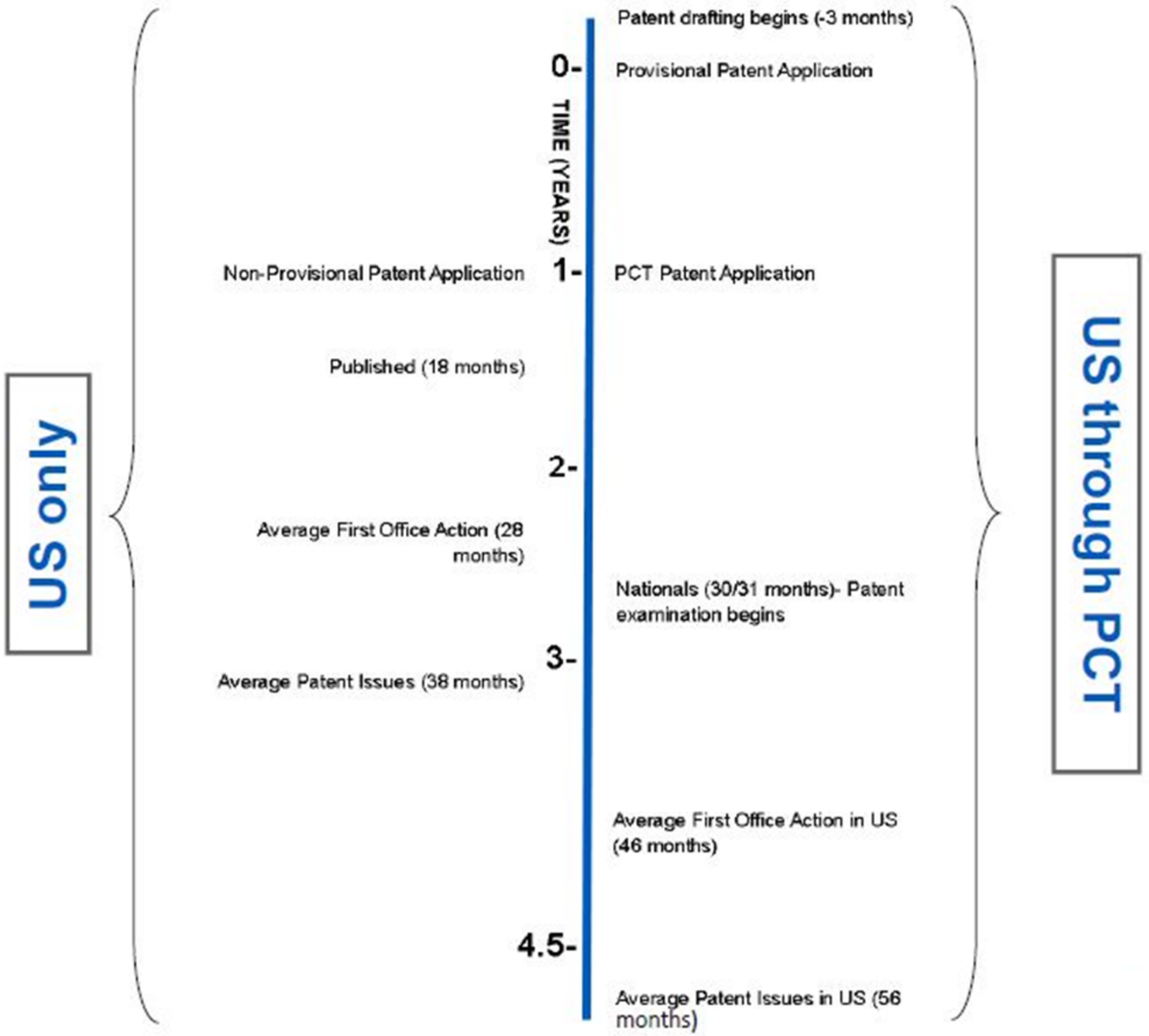
Utility Patent Process

- PATENT SEARCH: Search existing “prior art” to determine if patentable (Optional)
- APPLICATION PREP AND FILING: (Patent-Pending)
  - Application Components: written description, claims, drawings (where applicable)
- EXAMINATION AND PROSECUTION:
  - Most Applications are initially rejected requiring response(s)/Amendments to Application
- PUBLICATION at 18 months from filing date (by DEFAULT)
- ALLOWANCE / ISSUANCE (timescale: years after filing)
- MAINTENANCE: 3.5 years, 7.5 years, 11.5 years



Take Away: It is long and costly.

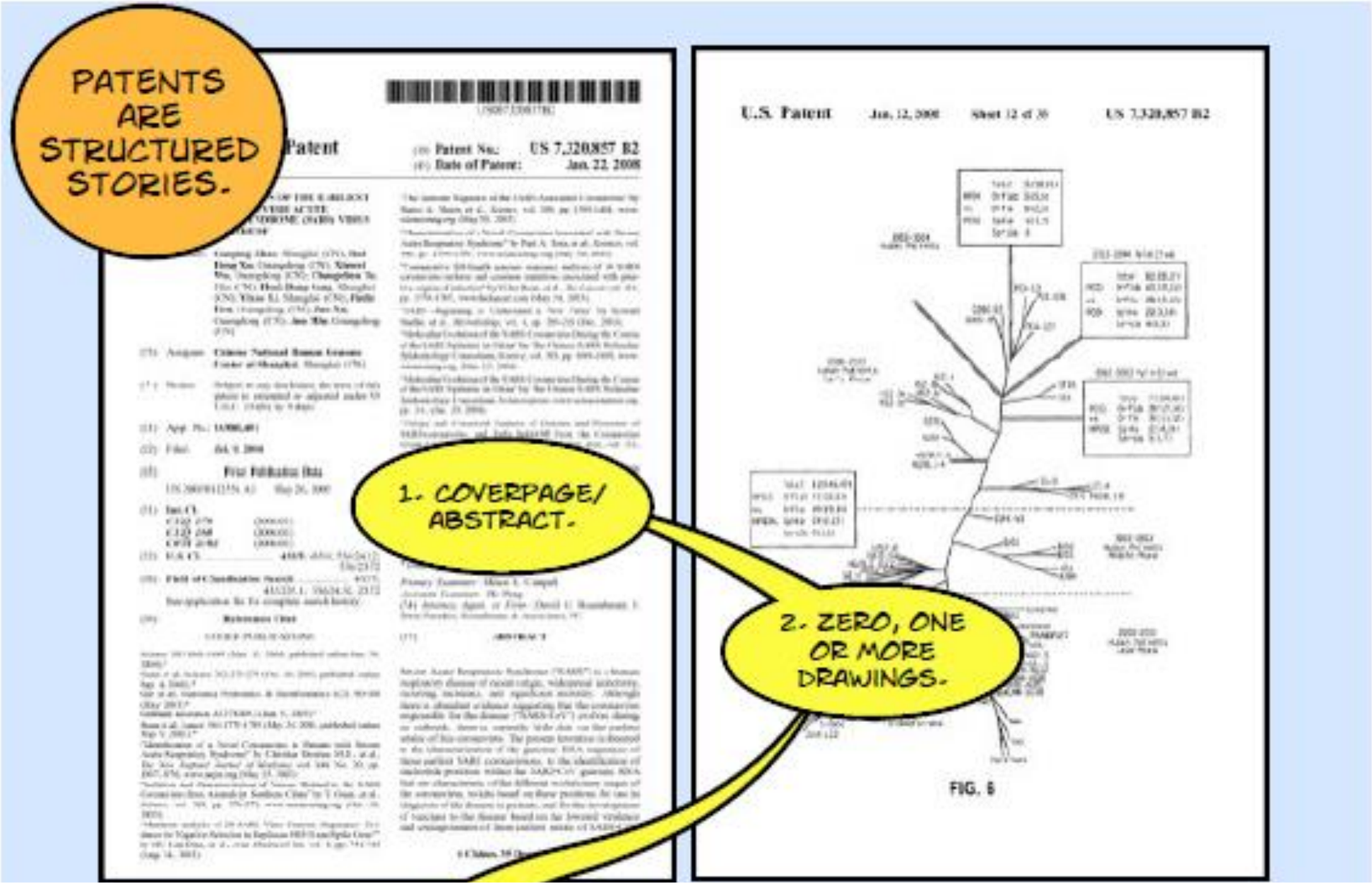
Patent Timeline



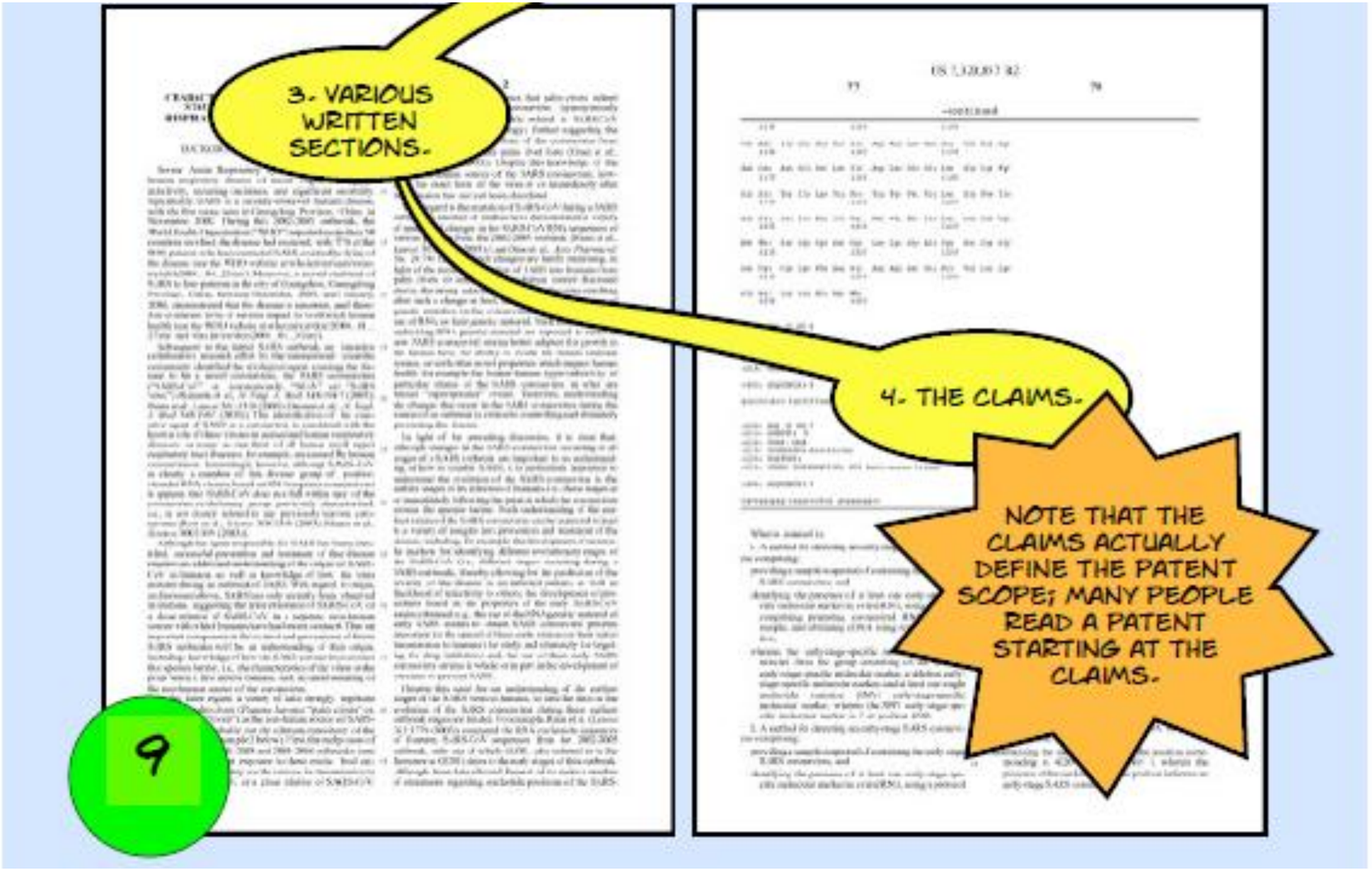
Quiz:

- You develop an inventive process for creating new compound A in March 2021. You disclose to SUNY RF in April 2021. You then submit a white paper that is immediately published (i.e., same day) on June 1, 2021 on the internet. What is the date of disclosure?

Anatomy of A Patent



Anatomy of A Patent



Are you an Inventor?

- Minimum requirement is to contribute to the conception of at least one claim in an issued patent.

- In contrast, a person who did not help conceive the invention is not an inventor.
  - For example, a person who merely identified the problem is not an inventor unless they also helped conceive the solution. In addition, a person who reduced the invention to practice without helping to conceive it is not an inventor.

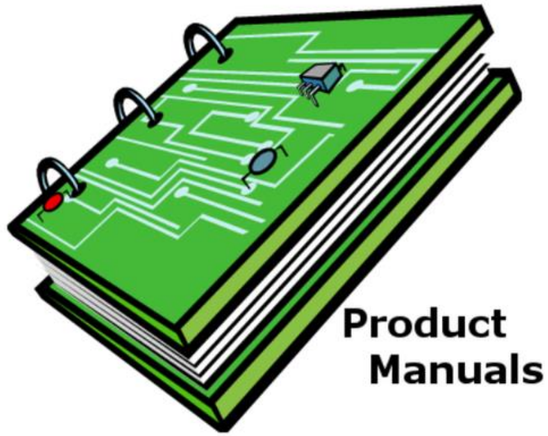
- Inventions with multiple inventors are owned equally by all inventors, even if conception contributions were unequal (unless a different agreement existed prior to filing)

- Inventorship is NOT the same as authorship

Copyrights


Software Apps


Instruction
Manual
6' Tape
Measure


Product
Manuals


iTraining

Copyrights

- Protect original expressions fixed in tangible medium
- Exclusive right to distribute, copy, prepare derivative works, perform, and display
- Last for the life of the author plus 70 years, or if authored by an employer, 95 to 120 years (depending on publication time and status)
- LIMITED TO EXPRESSION, NOT ACTUAL IDEAS!!!
- Examples: Poem written on paper, music, **SOURCE CODE**, manuals, marketing material, website/APP design, recorded performances, video, mixed media, video games, painting, etc.

Obtaining Copyrights

- Registration not required to establish rights
  - Just need something recorded in a tangible medium

- Registration through US Copyright Office gives extra rights … which can be important!!!
  - Registration process is relatively simple and cheap, ~$50
  - Registration important in litigation: can bring standing, up to $150k per infringing work if it's willful

- Infringement Standard includes (1) Access by infringer and (2) "Material Similarity"
  - Access requirement unique to Copyright

Creating Copyright Leverage

- Register Your Important Works – early and often (e.g., update quarterly)

- Always Have Written Agreements when dealing with Contractors
  - By default, contractors own copyrights in created works
  - REMEMBER - A creator of an original expression in a work is the author, and authors also are the owner of the copyright unless there is a written agreement by which the author assigns the copyright to another person or entity

Open Source Software

- Licenses copyright holders may grant to downstream users designed to keep the source code free
- Two types of Open Source licenses, with different concepts of freedom:

Permissive – Freedom for downstream users to use the code as they wish, including in proprietary (non-Open Source) programs

- Most popular licenses: MIT, BSD, Apache
- Favored by industry since it allows for downstream proprietary products

Copyleft – Maintains freedom of the code for all downstream users by requiring derivative works to also be Open Source

- Most popular licenses: GPLv2, GPLv3, LGPL
- Viral license: All modifications and derivative works must be released under the same Open Source license – no proprietary works

Working With Open Source Software

- Incorporating OS code into your new code
  - Pay close attention to source code's license, especially for copyleft/GPL works
- Choosing a license for your code - Considerations
  - Compliance with incorporated OS code, if any
  - Obligations from your funders, if any
  - Personal ethics and developer community
  - Your goals (e.g., commercialization?)
  - Custom licenses (e.g., academic use only)

Get in touch with us anytime if you have any questions!

Trademarks

Trademarks

- Identifiers of source of goods and/or services
- Word Mark v. Stylistic Mark NIKE v. 
- Rights: PREVENTS others from using confusingly similar mark
- Examples:
  - Name – Microsoft
  - Design – Nike's swoosh
  - Color – Tiffany Blue
  - Sound – Harley Davidson Motorcycle
  - Shape – Peeps
  - Scent – Play-Doh (granted 2018)

Trademark Rights

- Rights available by *using the mark in commerce and*/or via Federal Registration with USPTO
  - Rights limited to type of goods and services
    - E.g., Apple Computers vs. Apple Records (1978/2006)
- TM for Common Law or ® for Registered
- Likelihood of Confusion Standard for Infringement
- Scope of protection varies
  - Strength of the mark
    - Generic – Descriptive – Suggestive – Arbitrary – Fanciful
    - Aspirin – Pizza Hut– AIRBUS – Apple – Kodak

AIRBUS

KODAK

Pizza Hut

Apple

Trademark Infringement

The key test for trademark infringement is whether the defendant's use of a particular mark creates a likelihood of confusion

(1) the similarities of the goods and services involved
(2) evidence of actual confusion
(3) physical proximity
(4) likelihood of product line expansion


TRADE
SECRET

Trade Secrets

- Any secret information that gives an economic advantage over competitors that do not have access to the secret
- ONLY GOOD IF YOU CAN KEEP SECRET
  - Is reverse engineering possible? How likely is independent creation?
  - Don’t file or register – once the secret gets it out cannot put it back in the bottle
- Requires protection efforts commensurate with the value of the Trade Secret
  - Employment agreements; non-disclosure agreements, need-to-know access; notices on documents; sign in sheets, key card access, security check points, etc.
- Examples include, e.g., formulas (Coca-Cola), patterns, compilations, programs, devices, methods, techniques or processes, customer lists, and other confidential technologies
- Misappropriation punishable under law, but damages can be difficult to assess or retrieve
- Best offense is good defensive measure to prevent access and misappropriation

03.
Marketability

United States Patent [19]

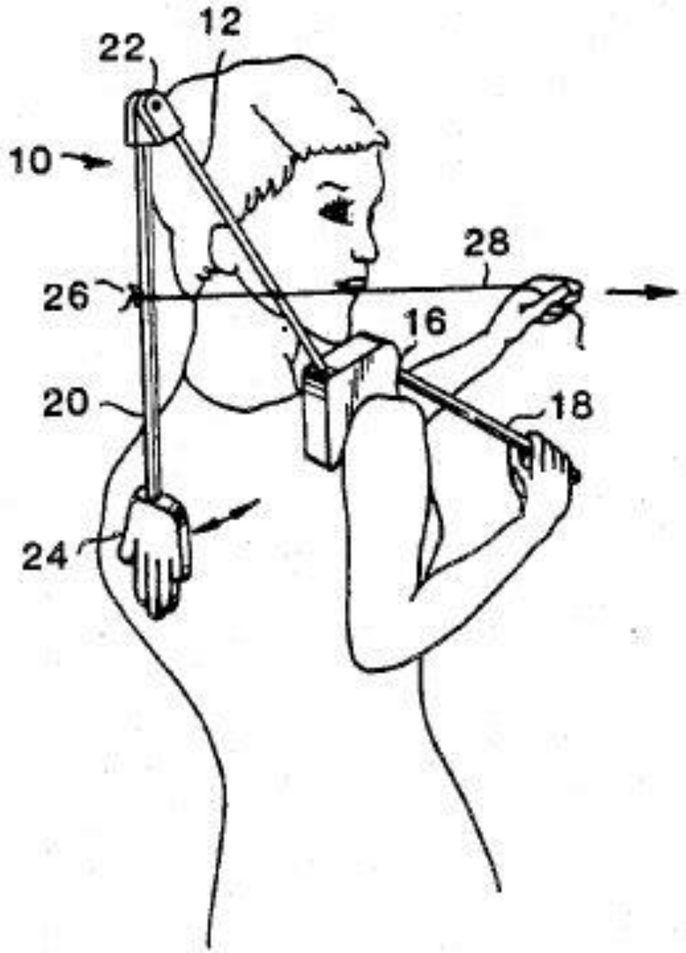
Piro

[11] **Patent Number: 4,608,967**

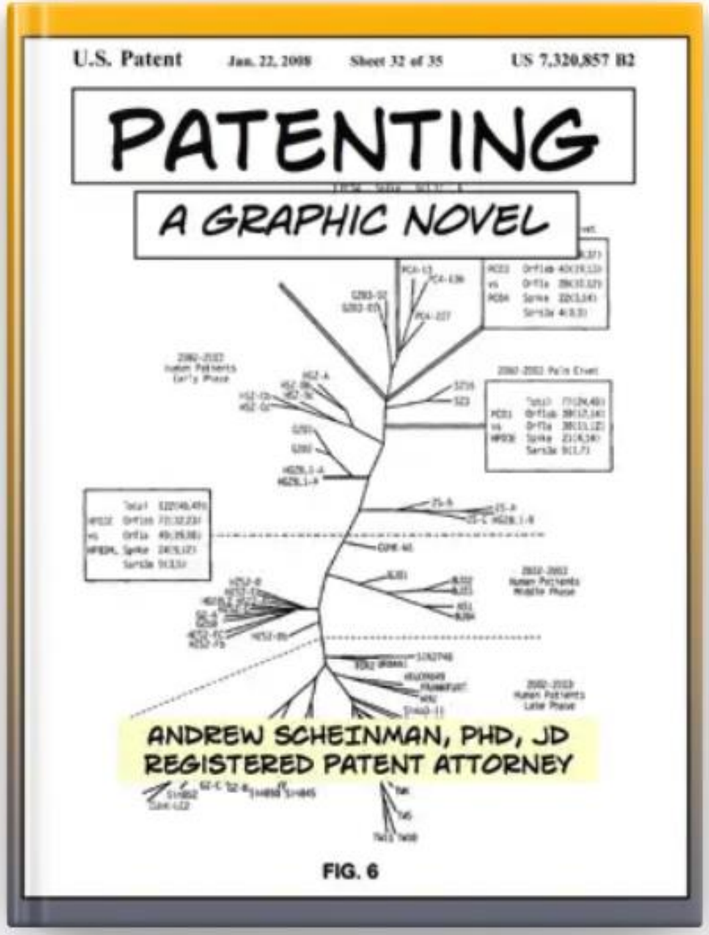
[45] **Date of Patent: Sep. 2, 1986**

[54] PAT ON THE BACK APPARATUS

3,679,107	7/1972	Perrine	224/265



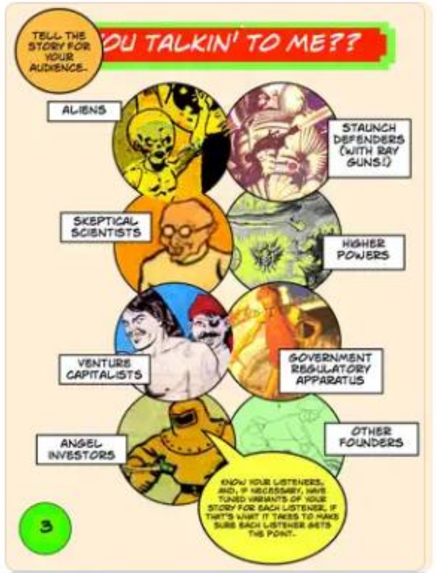
Apple Books Preview



Patenting: A Graphic Novel

Andrew Scheinman

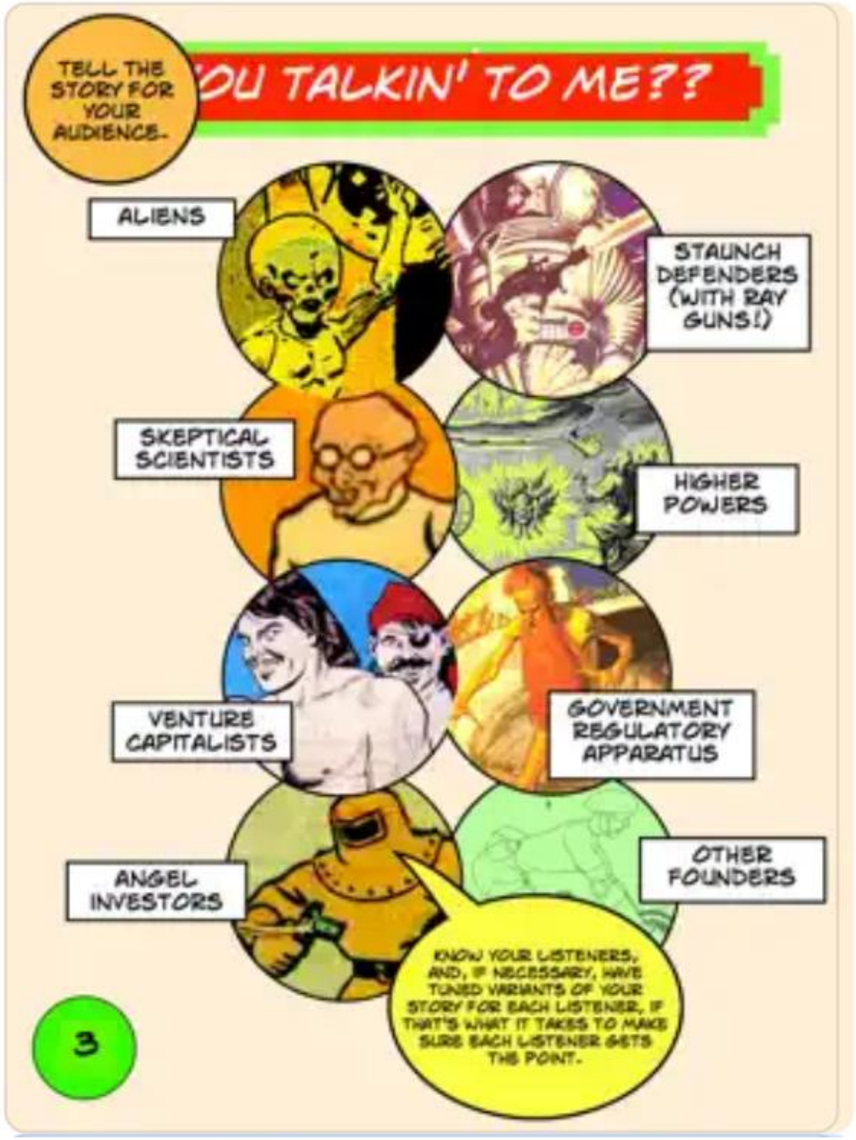

TELL A STORY, TALK ABOUT $.
CAMPUS LOVES
HI!
$
STORYTELLING ...
$
$$
$$$!
FINAL PITCH!
ALWAYS TELL A STORY, WHICH HAS A START, A RECOUNTING (STORYTELLING), A FINAL PITCH, AND MAKE SURE YOUR STORY ENDS HAPPILY ...
"BUSINESS EMBRACE"
WHERE "HAPPY" MEANS THE LISTENER IS LEFT THINKING THAT THERE'S $ TO BE MADE.
2


TELL THE STORY FOR YOUR AUDIENCE.
OU TALKIN' TO ME??
ALIENS
STAUNCH DEFENDERS (WITH RAY GUNS!)
SKEPTICAL SCIENTISTS
HIGHER POWERS
VENTURE CAPITALISTS
GOVERNMENT REGULATORY APPARATUS
ANGEL INVESTORS
OTHER FOUNDERS
KNOW YOUR LISTENERS, AND, IF NECESSARY, HAVE TUNED VARIANTS OF YOUR STORY FOR EACH LISTENER. IF THAT'S WHAT IT TAKES TO MAKE SURE EACH LISTENER GETS THE POINT.
3


STORIES EVOLVE WITH THE BUSINESS.
EVOLUTION
YOUR STORY SHOULD EVOLVE AS YOU TELL IT! REMEMBER, BARE-CHESTS AND SHUB SLACKS ARE A SIGN OF PROGRESS!
MMCML III
7


STORIES — INCLUDING PATENT STORIES — SHOULD NOT HAVE UNEXPECTED ELEMENTS.
FIG 1. ON THE TRACKS ...
FIG 2. SHE FALLS!
FIG 3. THE TRAIN RACES AHEAD!
FIG 4. THE GIANT BEE OF THE PERSHAT INVENTION RUSHES IN AND RESCUES THE CHILD ...
11


CAPTURES THE ZEITGEIST OF THE PATENT.
SCIENCE COMICS
64 PAGES!
13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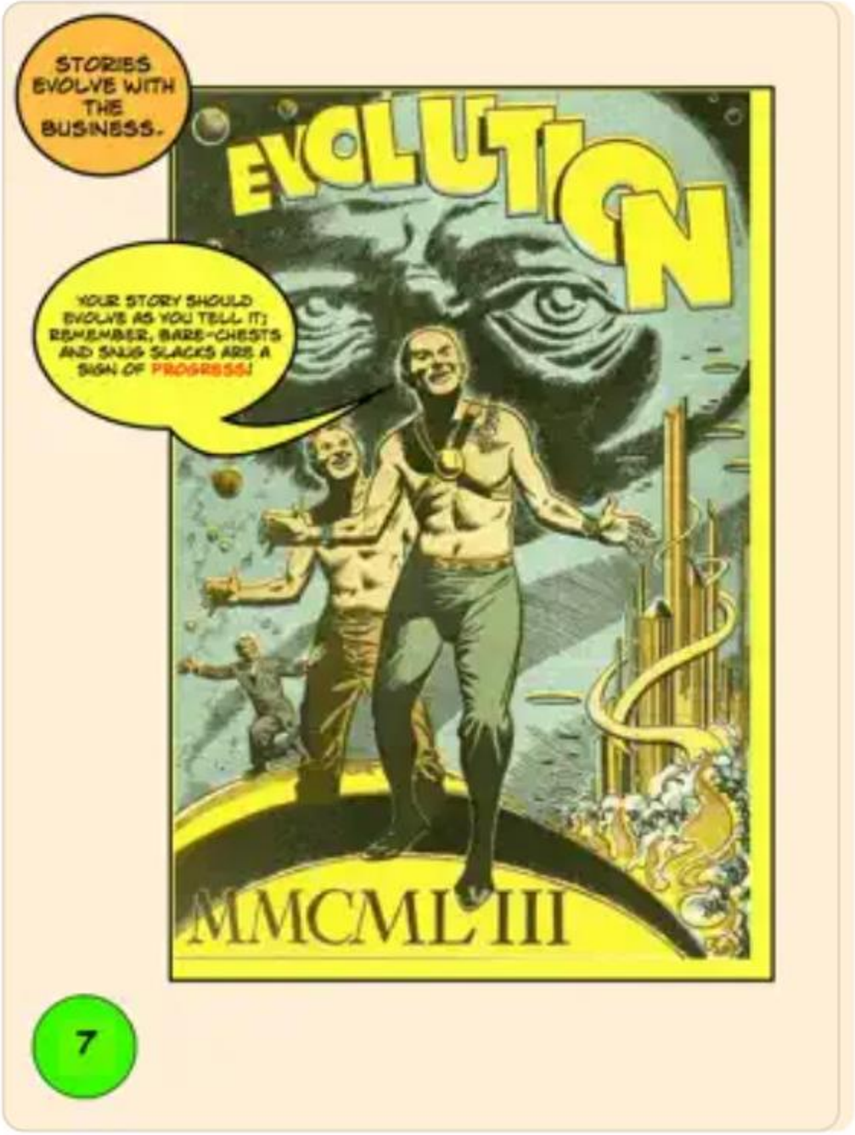
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EVOLUTION
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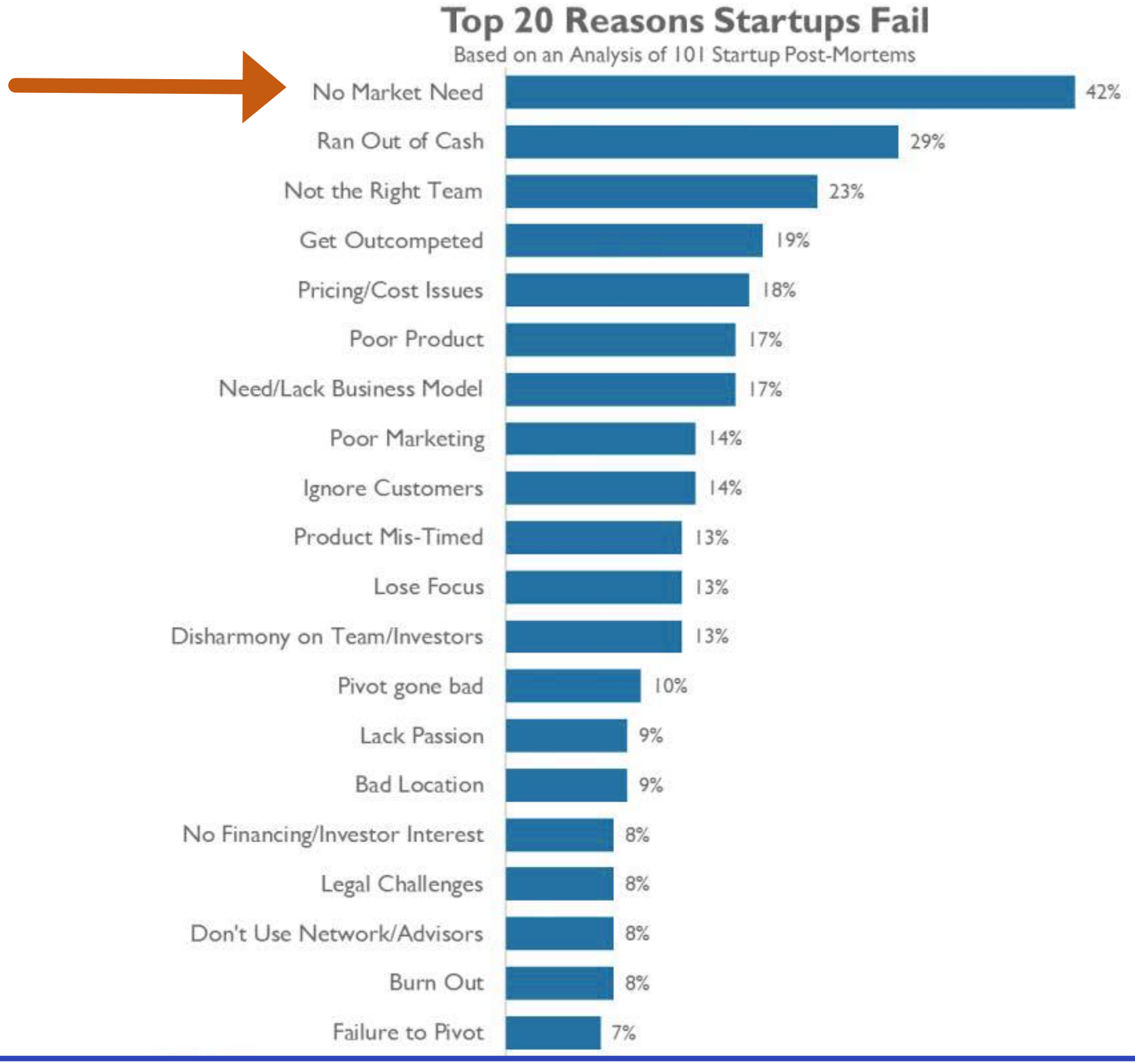
MMCMLIII
7

It’s Not All About Your Technology



“Build it and they will come” fallacy

Don’t let this be you!!

Marketability

Measure whether a product or service will appeal to customers and sell within a certain price range to generate a profit

In tech transfer, it’s critical to our prospects of finding a potential licensee willing to try and commercialize a particular technology

What is the goal of market research?

To determine if it makes sense to invest in forming a legal entity, paying patent attorneys, developing infrastructure, and hiring personnel if a comparable product or process already exists that works and is much less expensive

IS IT WORTH THE COST?

From: NYS Science+Technology Law Center , Lacey C. Grummons

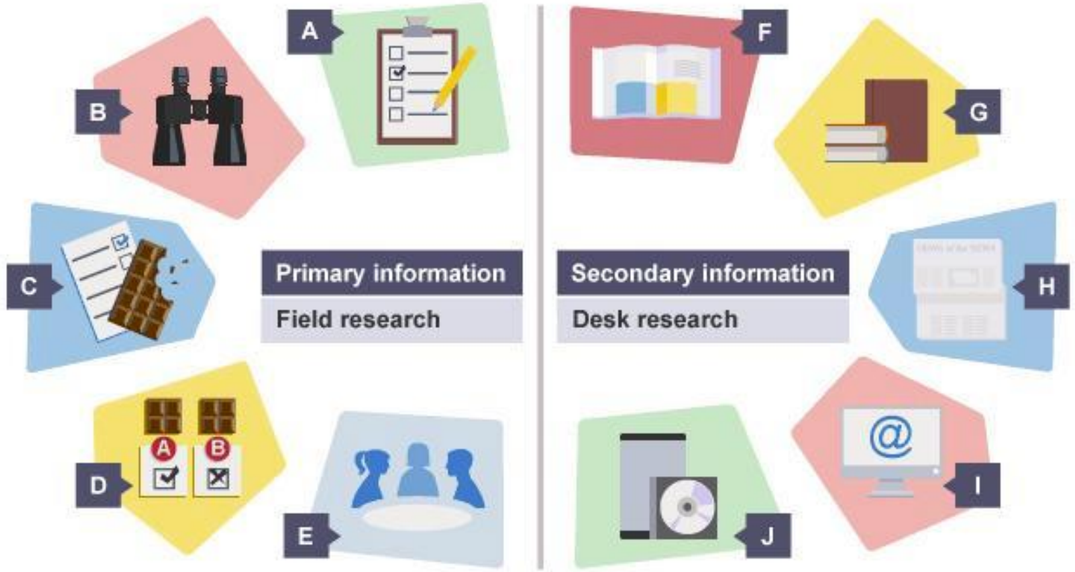
Addressable Market Applications

What market applications or segments might this technology address? – think blue sky

Marketability Aspects

- **Size**
- **Trends**
- **Growth Rate**
- **Competitors**
- Regulations
- Product Life Cycle
- Barriers to Entry
- More…

Market Research Tools:
Primary vs Secondary Research



A	Questionnaires and surveys	F	Articles
B	Observations	G	Books
C	Consumer trials	H	Newspapers
D	Hall tests	I	Internet
E	Focus groups	J	CD/DVD

IBISWorld

WHERE KNOWLEDGE IS POWER

2. IBIS World
www.ibisworld.com

FROST & SULLIVAN

https://theprauthority.com/market-research-methods/

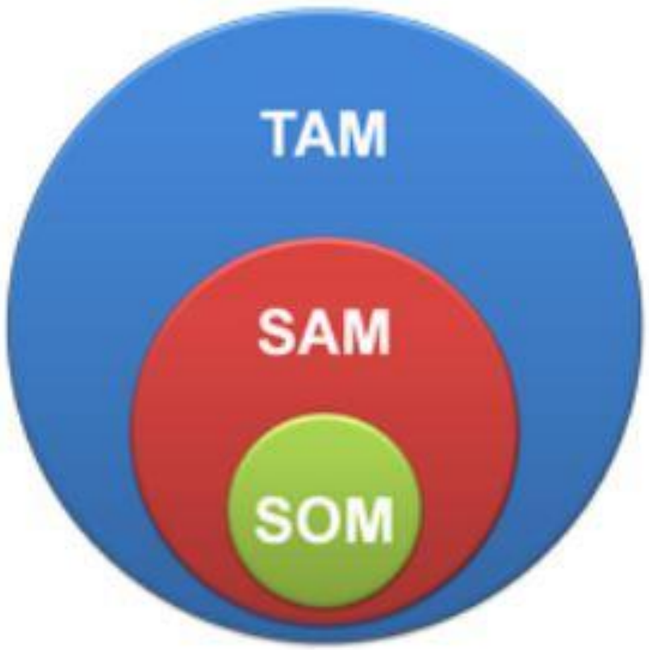
Market Sizing: Bottom Up vs. Top Down

- **Bottom Up**: Start small and work up
  - # units sold * $/unit = Total Available Market (TAM)
  - Need to make assumptions about how many units you can sell and what price customers will pay

- **Top Down**: Start high level and own
  - Based on secondary research on size of a target market (e.g., market reports)
  - Will need to make assumptions to narrow down to your product based on how the market is defined in the report
    - Ex.: You find a report on the market for all LED lighting, but your solution is designed for large warehouses

- To get a better estimate and to check yourself, use both approaches

Market Size



TAM = $_____
Total Available Market - total market demand for a product or service

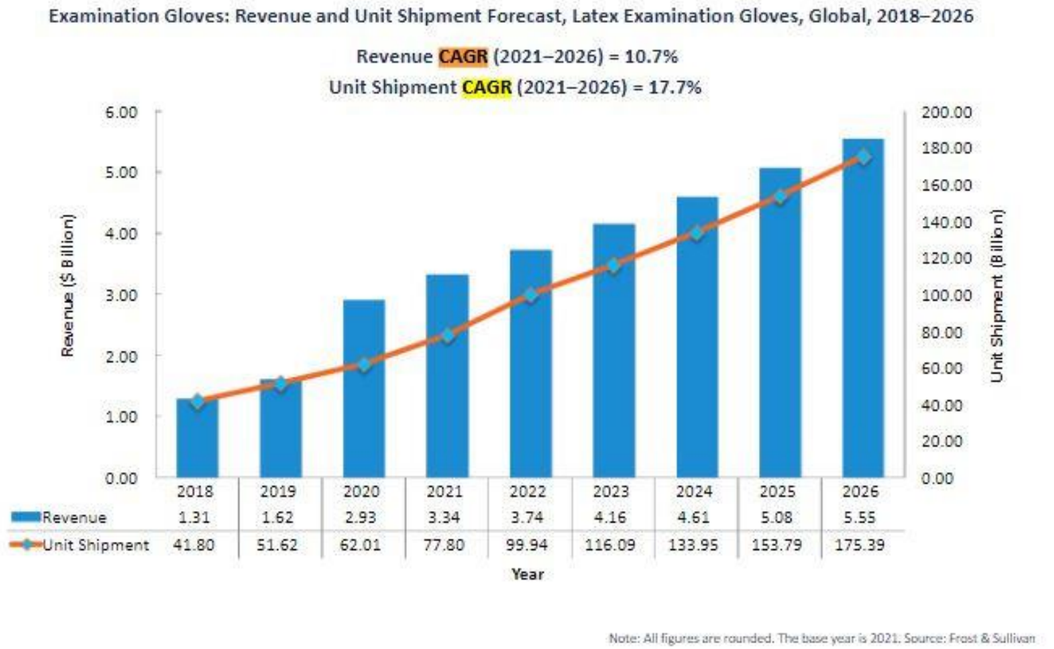
SAM = $_____
Serviceable Available Market - segment of TAM targeted by your products and services which is within your geographical reach

SOM = $_____
Serviceable Obtainable Market - portion of SAM that you can capture

Market Trends & Growth Rate

- Trends
  - What have been the major trends in your market in the last 5-10 years? Relatively unchanged? Turbulent with lots of competitors? Fast-paced innovation or reluctant to try new technologies?
- Growth Rate
  - Is this a growing market or a declining market? If growing, what's the projected growth rate?
  - Compound Annual Growth Rate (CAGR): Represents the rate of return on an investment over a defined period of time
    - Ultimately it can tell you how hot the market you're looking to enter is and if it's hot enough to entice investors
    - Good CAGR: Investing in the S&P is basically 8-10% return. Startup investors, knowing the risk and failure of the majority of their investments, will need you to convince them you can achieve much higher CAGR, >20%-100+%

Revenue and Unit Shipment Forecast, Latex Examination Gloves



Note: All figures are rounded. The base year is 2021. Source: Frost & Sullivan

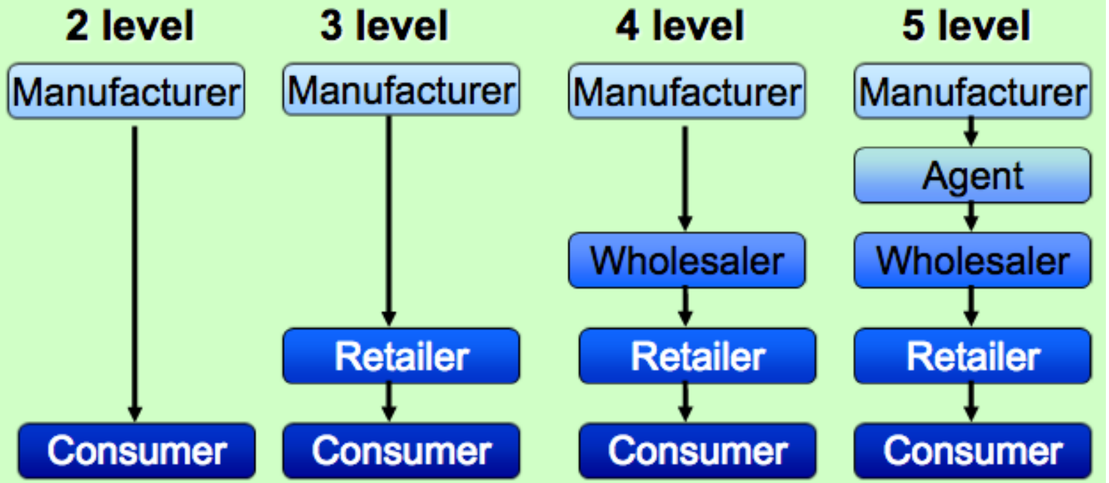
Potential Competitors

- Direct vs Indirect
- Basics: History, Size ($ and employees), Geographic reach
- Product: What do they sell? Strengths and weaknesses? IP?
- Price: How do they price it? Large markup? Subscription model?
- Promotion: What's their marketing strategy? Who do they target and how (i.e., channels)?
- Place: Online or brick and mortar? Direct or through a distributor?
- As you collect information ask yourself what their strengths and weaknesses are (e.g., technology, distribution channels, branding, reputation, IP defense)
- **What's the MVP you need to stand out?**

Distribution Channel / Supply Chain

What does your supply chain look like? What partners do you need?

Channel length = number of levels in a distribution channel.



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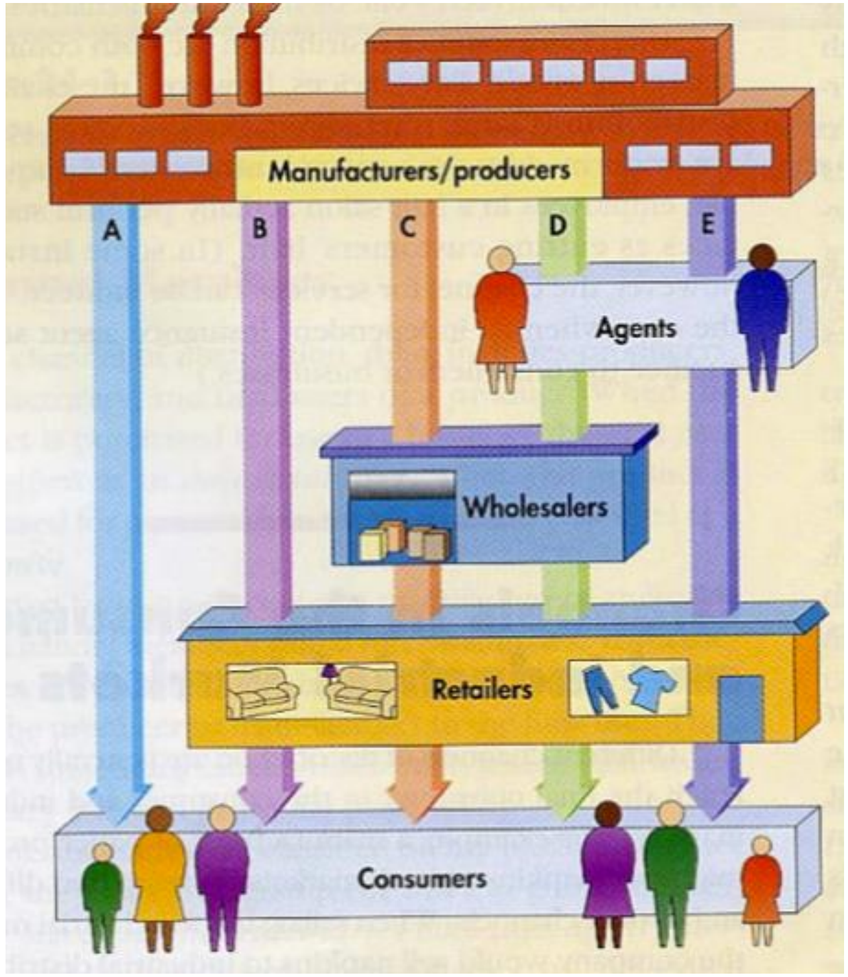

Organizational Tools

Competitive Analysis Table

Factors	My Business	Competitor 1	Competitor 2	Competitor 3	Competitor 4
Factor 1	★★★☆☆	★★☆☆☆	★☆☆☆☆	☆☆☆☆☆	★★☆☆☆
Factor 2	★★★☆☆	★★★★☆	★★☆☆☆	★☆☆☆☆	★★★★☆
Factor 3	★★★★★	★★★★☆	★★★★☆	★★★★★	★★☆☆☆
Factor 4	★★☆☆☆	★★★☆☆	★★★★☆	★★☆☆☆	★★☆☆☆
Factor 5	★★★★☆	★☆☆☆☆	★★★☆☆	★★★☆☆	★★★★☆
Factor 6	★★★★☆	★★★★☆	★★★☆☆	★★★☆☆	★★★☆☆
Factor 7	★★★☆☆	★☆☆☆☆	★☆☆☆☆	★★☆☆☆	★★★☆☆
Factor 8	★★★★☆	★★★★★	★★★☆☆	★★☆☆☆	★★★★☆

Organizational Tools - SWOT

Strengths	Weaknesses
Opportunities	**Threats**

Organizational Tools

High price

HIGH END 	**GOLDEN GOOSE** 
LABOR OF LOVE 	**MASS MARKET** 

Few customers

Many customers

Low price

Market Analysis Advice

- Don’t let perfect be the enemy of the good

- Do enough secondary research to give you a lay of the land and a market to start with, then let **primary research, customer discovery**, be your guide

Helpful Resources

- Research Foundation YouTube, Customer Discovery
- Emergent Online
- ZoomInfo
- EDGAR
- IBIS World
- North American Industry Classification System
- InnovationQ
- Pharma IC from GlobalData
- Frost & Sullivan
- LinkedIn
- U.S. Small Business Administration
- Google Trends
- Your specific industry trade associations and government databases

Meet with your university's Business Librarian!

Contact us:

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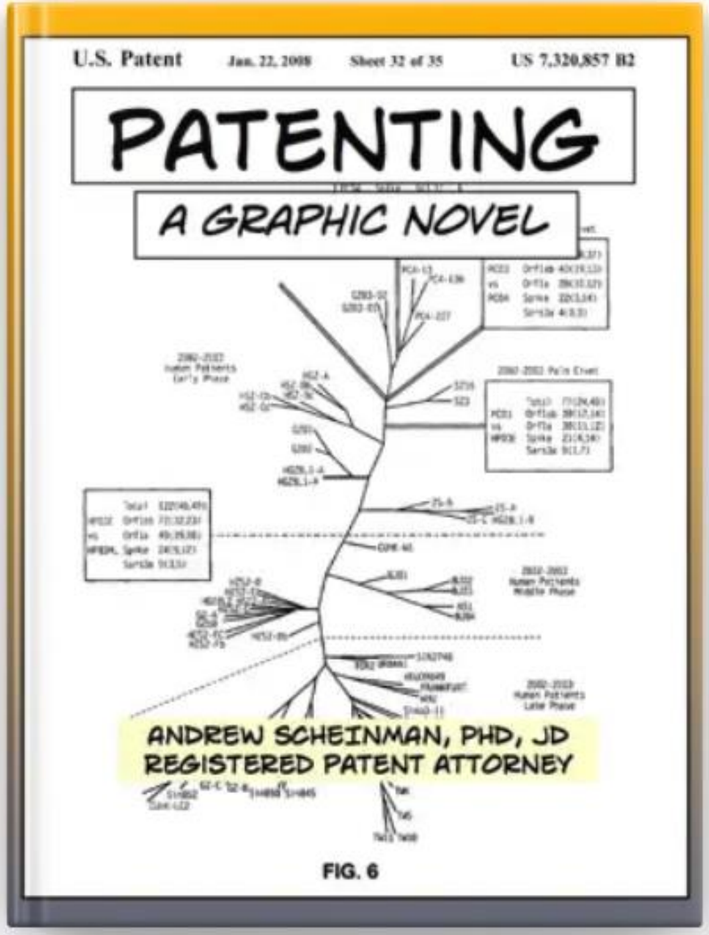
commercialization@rfsuny.org

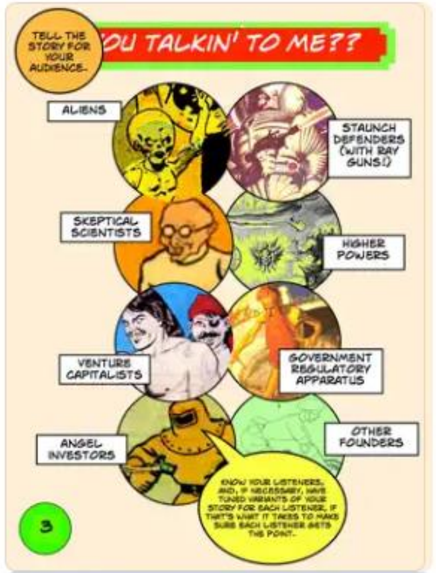
Apple Books Preview



Patenting: A Graphic Novel

Andrew Scheinman

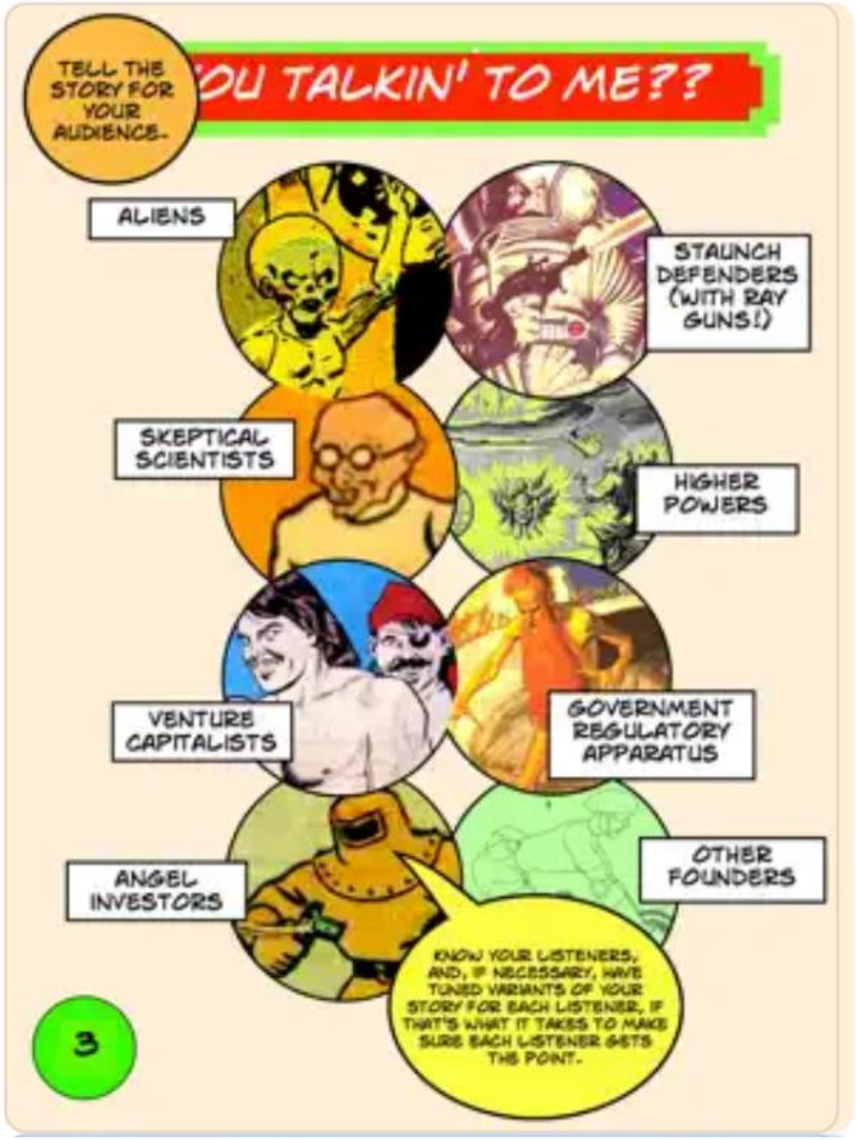

TELL A STORY, TALK ABOUT $.
CAMPUS LOVES
HI!
$
STORYTELLING ...
$
$$
$$$!
FINAL PITCH!
ALWAYS TELL A STORY, WHICH HAS A START, A RECOUNTING (STORYTELLING), A FINAL PITCH, AND MAKE SURE YOUR STORY ENDS HAPPILY ...
"BUSINESS EMBRACE"
WHERE "HAPPY" MEANS THE LISTENER IS LEFT THINKING THAT THERE'S $ TO BE MADE.
2


TELL THE STORY FOR YOUR AUDIENCE.
OU TALKIN' TO ME??
ALIENS
STAUNCH DEFENDERS (WITH RAY GUNS!)
SKEPTICAL SCIENTISTS
HIGHER POWERS
VENTURE CAPITALISTS
GOVERNMENT REGULATORY APPARATUS
ANGEL INVESTORS
OTHER FOUNDERS
KNOW YOUR LISTENERS. AND, IF NECESSARY, HAVE TUNED VARIANTS OF YOUR STORY FOR EACH LISTENER. IF THAT'S WHAT IT TAKES TO MAKE SURE EACH LISTENER GETS THE POINT.
3


STORIES EVOLVE WITH THE BUSINESS.
EVOLUTION
YOUR STORY SHOULD EVOLVE AS YOU TELL IT! REMEMBER, BARE-CHESTS AND SHUB SLACKS ARE A SIGN OF PROGRESS!
MMCML III
7


STORIES — INCLUDING PATENT STORIES — SHOULD NOT HAVE UNEXPECTED ELEMENTS.
FIG 1. ON THE TRACKS ...
FIG 2. SHE FALLS!
FIG 3. THE TRAIN RACES AHEAD!
FIG 4. THE GIANT BEE OF THE PRESENT INVENTION RUSHES IN AND RESCUES THE CHILD ...
11


CAPTURE THE ZEITGEIST OF THE PATENT.
SCIENCE COMICS
13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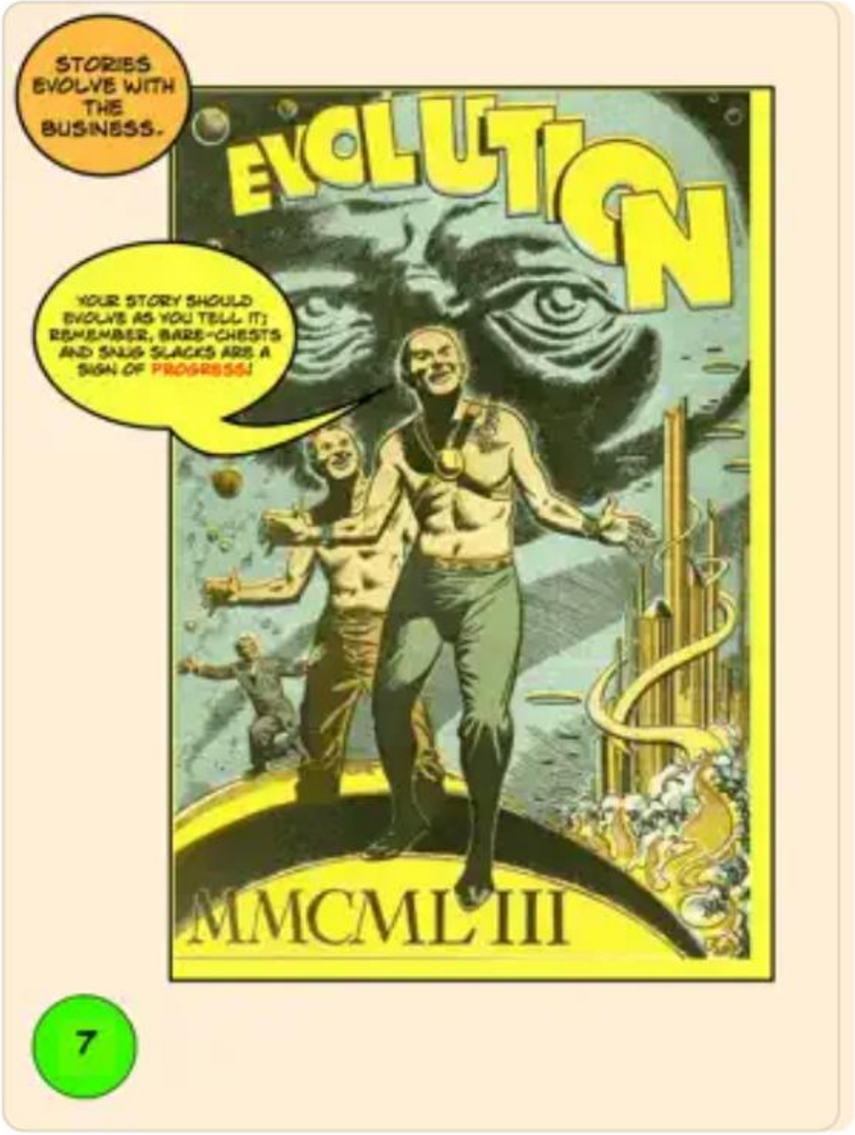
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EVOLUTION
MMCMLIII
7

Thank you!

- Please answer the Zoom poll question.
- Recording will be sent tomorrow.
- Don’t forget to connect with us on LinkedIn.
- See you next week for

67

Week 4: June 28

How To Win Grants – Mastering Non-Dilutive Funding

with Kirk Macolini from InteliSpark