Intellectual Capital and Intellectual Property

Dr. Jack M. Wilson, Distinguished Professor of Higher Education, Emerging Technologies, and Innovation

- Generating and acquiring new knowledge.
- Identifying and codifying existing knowledge.
- Storing and retrieving knowledge.
- Sharing and distributing knowledge across the organization.
- Exploiting and embedding knowledge in processes, products and services.

Learning from:

- Experimentation
  - Research and Development and Incremental Innovation
- Experience
- Acquisition – looking for innovation internally and externally
  - Cisco is widely considered a master at external acquisition of intellectual property and intellectual capital.
  - Biotech examples

From Data to Knowledge

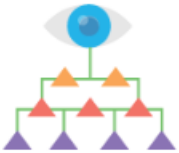
- **Data -** a set of discrete raw observations, numbers, words, records and so on,
- **Information -** data that has been organized, grouped or categorized into some pattern.
- **Knowledge -** information that has been contextualized, given meaning and therefore made relevant and easier to operationalize.
- **Big data**: How to take the massive data streams created by new IT and social media applications and turn it into information and organize it into knowledge.
  - Massachusetts Big Data - http://massbigdata.org/
    - http://masstech.org/sites/mtc/files/documents/InnovationInstitute/Big_Data_report_2014_web_updated_7_2014.pdf
  - IBM Watson and Data Analytics
    - https://www.ibm.com/analytics/us/en/technology/predictive-analytics/

Predictive Analytics and IBM Watson

"Predictive analytics brings together advanced analytics capabilities spanning ad-hoc statistical analysis, predictive modeling, data mining, text analytics, entity analytics, optimization, real-time scoring, machine learning and more."

"IBM puts these capabilities into the hands of business users, data scientists, and developers."

- https://www.ibm.com/analytics/us/en/technology/predictive-analytics/



Deploy insights into business processes

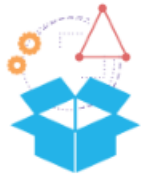
Build and deploy predictive models directly into your business processes.

Hands-on predictive analytics

Easy to use, powerful tools of all phases of analytical projects.

Full breadth of analytics techniques

Use multi-faceted predictive analytics capabilities in a single solution.



Embrace and extend open-source

Amplify the power of your analytics without losing control with R, Python and more.

Knowledge Comes in Different Forms

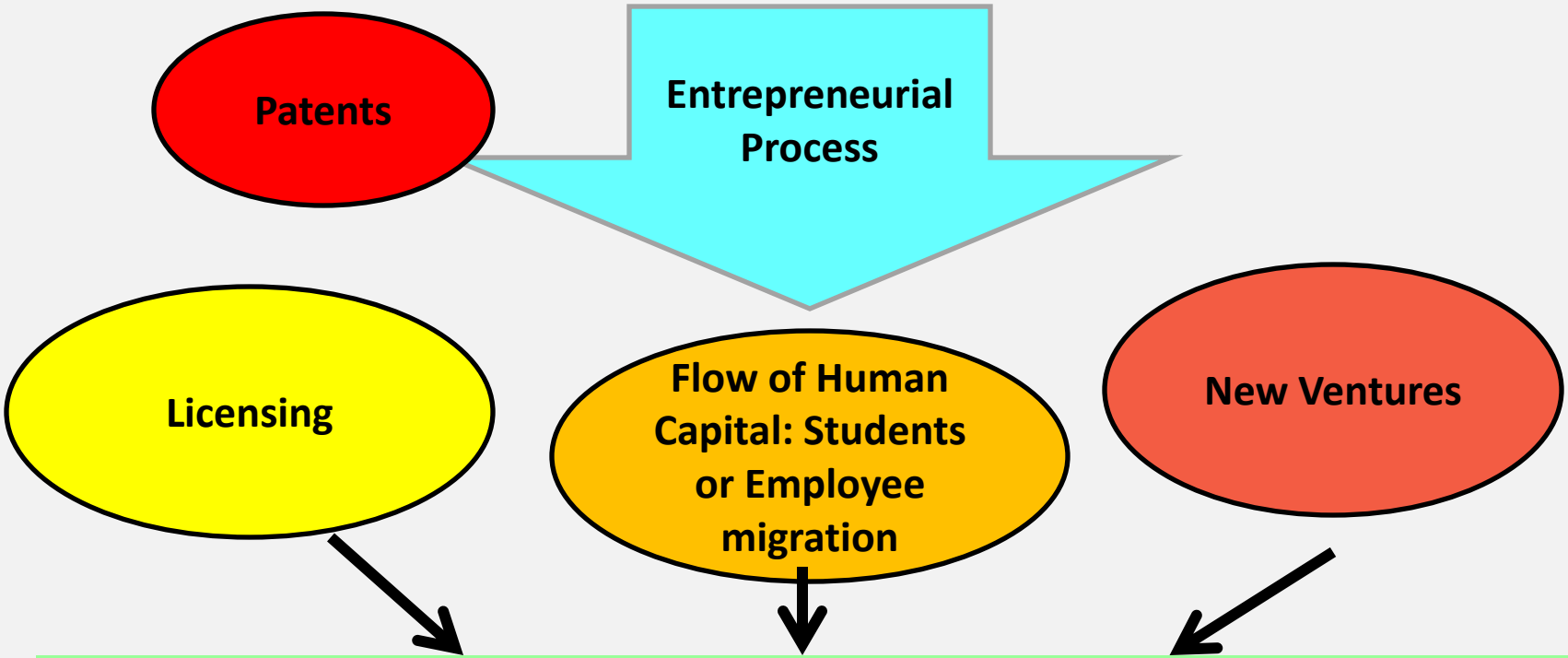
- Explicit knowledge,
  - Can be codified, that is expressed in numerical, textual or graphical terms, and therefore is more easily communicated (e.g. the design of a product).

- Implicit (tacit) knowledge,
  - personal, experiential, context-specific and hard to formalize and communicate (e.g. how to ride a bicycle).
  - Tacit knowledge is often held in human beings –human intellectual capital.

- Many companies have discovered that much of their intellectual capital resides in employees. If those employees were to retire or leave the enterprise, then that capital might be lost. For this reason many companies have specific programs to learn from those employees and reduce their implicit knowledge to digital form as explicit knowledge.
- At the other end of the career spectrum, it has been shown that the flow of intellectual capital from universities into the market place is often because students take the knowledge they have gained into external enterprises upon graduation.

From Idea to Market or Community Use

Idea Generators: University Research, Corporate Innovation, Individual Invention, Government Labs, Social Innovation, Intellectual Capital



http://www.jackmwilson.net/Entrepreneurship/TE/TE-Chap3-OpportunityGenerationRecognition.pdf

How is knowledge communicated and transformed?

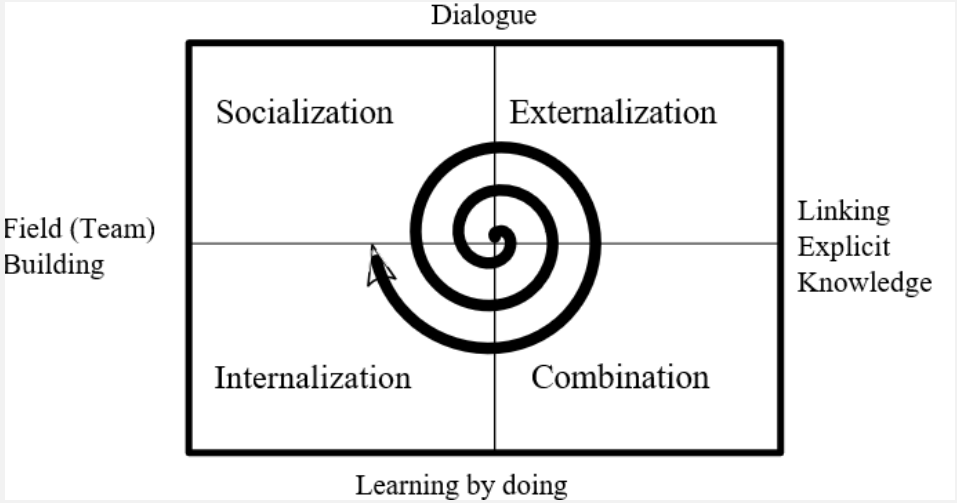
- Socialization –
  - tacit to tacit knowledge, in which the knowledge of an individual or group is shared with others.
  - At the beginning of employees careers, they are often advised by peers and mentored by leaders.
- Externalization –
  - tacit to explicit knowledge, through which the knowledge is made explicit and codified in some persistent form.
  - Experienced individuals write books and articles or are interviewed to write down (or digitally record) their knowledge and experience.
- Combination –
  - explicit to explicit knowledge, where different sources of explicit knowledge are pooled and exchanged.
  - Organizations often create cross functional groups so that ideas from one domain might inform another.
- Internalization –
  - explicit to tacit knowledge, whereby other individuals or groups learn.
  - Example: you are now internalizing the collected insights of many who have studied entrepreneurship and innovation

These process usually include both person to person and information technology approaches. Today, storage of knowledge or intellectual property is primarily digital.

The Knowledge Spiral as described by Nonaka & Takeuchi

"Different frameworks for distinguishing between different 'types of' knowledge exist. One proposed framework for categorizing the dimensions of knowledge distinguishes tacit knowledge and explicit knowledge. Tacit knowledge represents internalized knowledge that an individual may not be consciously aware of, such as to accomplish particular tasks. At the opposite end of the spectrum, explicit knowledge represents knowledge that the individual holds consciously in mental focus, in a form that can easily be communicated to others."

Ikujiro Nonaka proposed a model (SECI for Socialization, Externalization, Combination, Internalization) which considers a spiraling interaction between explicit knowledge and tacit knowledge. In this model, knowledge follows a cycle in which implicit knowledge is 'extracted' to become explicit knowledge, and explicit knowledge is 're-internalized' into implicit knowledge." Wiki



Wikipedia:
https://en.wikipedia.org/wiki/Knowledge_management
Nonaka-Takeuchi:
http://www.tlu.ee/~sirvir/IKM/Theoretical_models_of_Information_and_Knowledge_Management/the_nonaka_and_takeuchi_knowledge_spiral_model.html

By JohannesKnopp - Own work, Copyrighted free use, https://commons.wikimedia.org/w/index.php?curid=13188318

- Intangible Assets versus Intangible Competencies
  - Assets: Intellectual Property Rights and Reputation
  - Competencies: employee and supplier skills and culture
- Richard Hall proposed a framework:
  - **Intangible**, off balance sheet, assets, such as patents, licenses, trademarks, contracts and protectable data.
  - **Positional**, which are the result of previous endeavour (i.e. with a high path dependency), such as processes and operating systems, and individual and corporate reputation and networks.
  - **Functional**, which are either individual skills and know-how or team skills and know-how, within the company, at the suppliers or distributors.
  - **Cultural**, including traditions of quality, customer service, human resources or innovation.
- Questions
  - Are we making the best use of this resource?
  - How else could it be used?
  - Is the scope for synergy identified and exploited?
  - Are we aware of the key linkages which exist between the resources?

- Community of Practice
  - A group of individuals who share interests, careers or tasks. It is generally an informal group, but can be formalized by trade groups.
- Knowledge Translator
  - An individual than can express the interest of one community in terms of the perspective of a different community.
  - Gatekeeper role – a person who plays a key role in the flow of ideas from those who create them to those who use them.
- Knowledge Broker
  - If the person is formally embedded in two or more communities and has responsibility for translating ideas.
- Boundary object or practice
  - Something of interest to two or more communities of practice

The Four Key Forms of Intellectual Property (IP)

- Patents
- Copyright
- Trademarks
- Trade Secrets

- The following slides are adapted from my text on Technological Entrepreneurship
  - http://www.jackmwilson.net/Entrepreneurship/TE/TE-Chap4-IntellectualProperty.pdf
- I also have several cases that illustrate these principles
  - http://www.jackmwilson.net/Entrepreneurship/Cases/Case-CRISPR-MITvsUC-IP.pdf
  - http://www.jackmwilson.net/Entrepreneurship/Cases/Case-Napster-Ethics-Legal.pdf

Patents

Patents are often the first thing that scientists or engineers think of when dealing with intellectual property.

- Patents
  - A patent is a grant from the federal government conferring the rights to exclude others from making, selling, or using an invention for the term of the patent as many as 20 years.
- To obtain a patent, an invention must:
  - Be novel
    - It must be something that is completely new. If others have done it before and disclosed that, then it cannot be patented.
  - Not be obvious to a person of ordinary skill in the field
    - This is often the point around which patents disputes start. If one can show that an idea would be obvious to anyone skilled in the field then it cannot be patented. Sometimes that can be in heavy dispute.
  - Be useful
    - You cannot patent something that does not have an obvious immediate use.

Three forms of patent protection

There are three basic forms of patent protection that are each designed to do something a bit different.

- The Utility Patent:
  - Duration is 20 years from the date of the original application.
  - It is awarded for any new or useful process, machine, manufacture, or composition of material or any new and useful improvement thereof.
- The Design Patent
  - The duration is 14 years from the date the patent is awarded.
  - It is awarded to protect the invention of a new, original, and ornamental design for manufactured products.
- The Plant Patent
  - The duration is 20 years from the date of the original application
  - It protects any new varieties of plants than can be reproduced asexually.

What Can You Patent?

You can patent any:

- Process
- Machine
- Manufacture
- Chemical formula
- Design
- Plants

The Business Method Patent

In 1998, a Federal Court ruling assigned the US Patent and Trademark Office (USPTO) with the responsibility of issuing patents for unique **automated technologies** that process data or generate revenue (i.e. business models, methods, processes—including computer software).

Suddenly, e-commerce features such as subscription-based access, targeted advertising networks, portal sites, online auctions, virtual malls, and even forums were now considered business models, methods, and processes that could be patented.

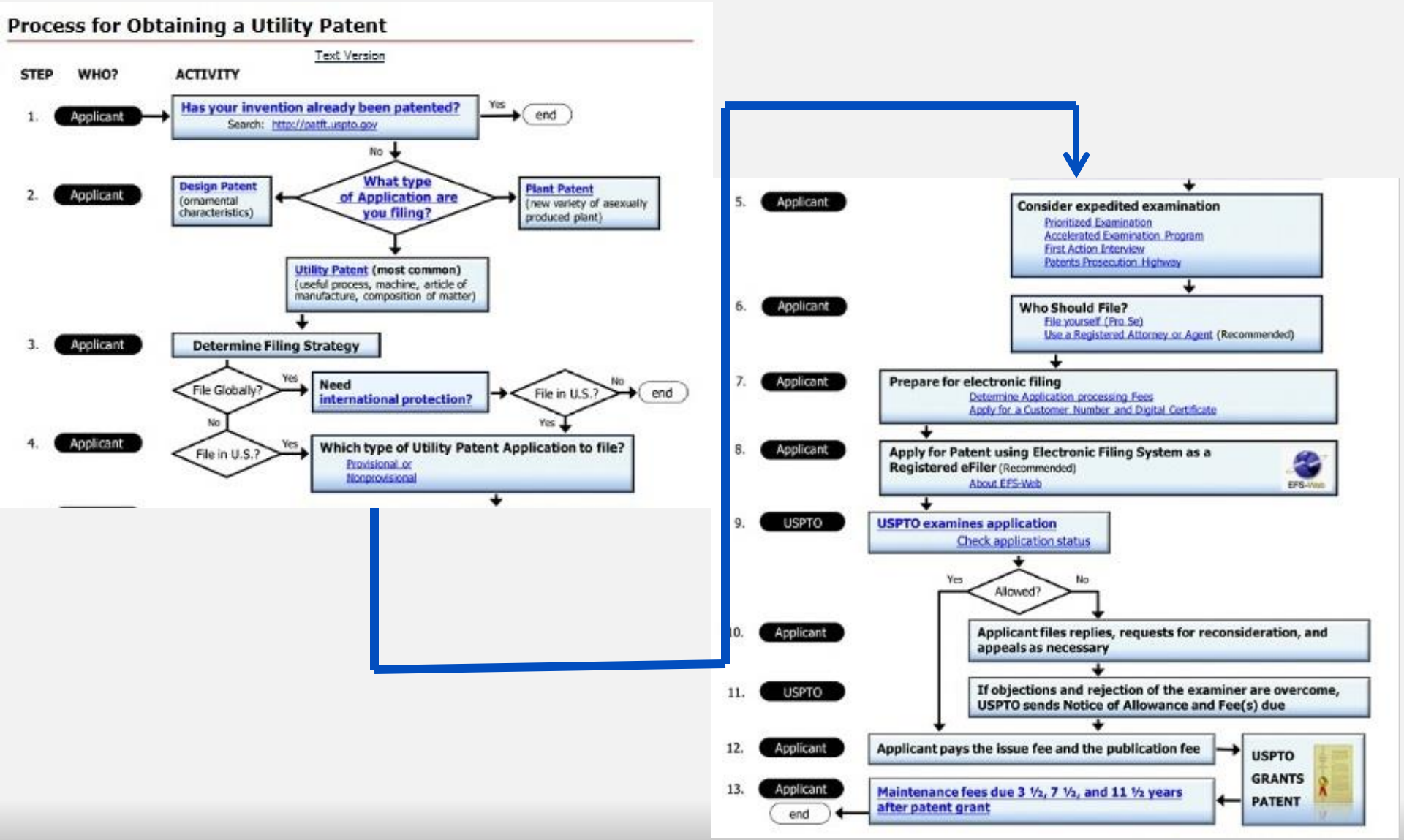
The Business Method Patent has become a very important form of patent in the eCommerce and other internet mediated business interactions. A business method patent is a patent that protects an invention that is or facilitates a method of doing business.

- This includes new types of e-commerce, insurance, banking, tax compliance etc.
  - This is a relatively new type of patent and continues to be the subject of controversy and litigation.
- Here are a few important examples:
  - Amazon.com's one-click ordering system,
  - Priceline.com's "name-your-price" business model
  - Netflix's method for allowing customers to set up a rental list of movies to be mailed to them.

Some areas of Business Method Patents

- Financial - credit and loan processing, point of sale systems, billing, funds transfer, banking clearinghouses, tax processing, and investment planning
- Financial instruments and techniques – derivatives, valuation, index-linking
- Optimization – scheduling and resource allocation
- Marketing - advertising management, catalog systems, incentive programs, and coupon redemption
- Information acquisition, human resource management, accounting, and inventory monitoring
- e-commerce tools and infrastructure – user interface arrangements, auctions, electronic shopping carts, transactions, and affiliate programs
- Voting systems, games, gambling, education and training
  - http://eml.berkeley.edu/~bhhall/papers/BHH%20on%20BMP%20May03WP.pdf

USPTO Patent Process- http://www.uspto.gov/patents/process/



Advantages to patents

There are some definite advantages to having a patent

- Provides a monopoly right for the life of the patent
- Raises the cost of imitation
- Helps to raise capital by demonstrating competitive advantage
  - Investors like to see that the intellectual property behind a new venture is protected so that someone else cannot come along and easily enter the same market.
- Prevents a second party from using the invention as a trade secret
- Cross-licensing (with potential royalties or joint profits)

Disadvantages of patents

- Requires disclosure of the invention
  - This means that others can see how you did it.
- Provides only 14-20 year monopoly
  - When a drug goes off patent, then the generic imitations quickly eliminate the original market.
- Can be circumvented
  - By looking at your disclosure, a competitor might find a way to invent around your patent.
- Difficult and costly to defend
- Less effective for most types of technology
  - Can be irrelevant if technology is fast moving
- Requires world-wide patent application
  - And the rules are different and the process is costly, but failure to do so means that you may lose the market in that country.

Remember that it is more costly to defend and enforce a patent than it is to obtain a patent.

Apple Design Patents

- Jan. 5, 2007: Apple files for 4 design patents covering the basic shape of the iPhone a mere four days later, Apple releases the IPhone to the public.
- June 2007: Apple files color design patents covering 193 screen shots of graphical user interfaces for the iPhone.
- April 15, 2011: Apple sues Samsung for infringement based upon these patents, some utility patents, registered trademarks and trade dress rights.
- Samsung counter sued in both Korean and Japanese courts
- Apple sued in German (EU), Dutch, and Australian courts.
- Samsung sued in Italian, British, and French courts.
- There were then quite a few conflicting decisions that barred sales of Apple in some jurisdictions and Samsung in others.

- August 24, 2012: A U.S. Court the jury returned a verdict largely favorable to Apple.
  - It found that Samsung had willfully infringed on Apple's design and utility patents and had also diluted Apple's trade dresses related to the iPhone.
    - It had infringed: home button, rounded corners, tapered edges, bounce-back effect, tap to zoom, and on screen navigation.
  - The jury awarded Apple $1.049 billion in damages and Samsung zero damages in its counter suit
- October 23, 2012, U.S. Patent and Trademark Office invalidated Apple's bounce back patent
- For those interested in the detailed history please see the Wikipedia entry at: https://en.wikipedia.org/wiki/Apple_Inc._v._Samsung_Electronics
- To make a long story short, the two companies continued to spar and try to ban one another's product –with some partial successes over the next three years.

Dénouement

- Reuters: Andrew Chung; NY; Dec 4, 2015 12:00pm EST
- **Samsung to finally pay Apple $548 million in patent dispute**
  - http://www.reuters.com/article/us-apple-samsung-payment-idUSKBN0TN20R20151204

"The payment comes after a U.S. appeals court last May reduced a $930 million judgment against Samsung by $382 million, stemming from a 2012 verdict for infringing Apple patents and copying the look of the iPhone.

Another trial over remaining damages relating to some of Samsung's infringing products in the case is set to go ahead next spring.

Even though the U.S. Court of Appeals for the Federal Circuit in Washington, D.C. had authorized damages to Apple in May, Samsung again appealed the final figure to the same court, and was rebuffed twice more.

Now agreeing to pay, Samsung told the San Jose court that it expects to be reimbursed if it eventually succeeds in a forthcoming appeal to the U.S. Supreme Court over its liability for copying the patented designs of the surface, bezel and user interface of the iPhone, which accounted for $399 million of the total award.

South Korea-based Samsung also said it reserved the right to be reimbursed in the future if a decision by the U.S. Patent and Trademark Office invalidating one of the Apple patents in the case, related to touchscreen gestures, is upheld.

Apple intends to appeal that ruling and said in court documents it "disputes Samsung's asserted rights to reimbursement."

Patents are useful, but they require vigorous defense

- The moral of the story: Patents are not that hard to obtain, but they are very difficult to defend.
- It often costs far more to defend a patent than to obtain a patent.
- In this case it was two large companies with very deep pockets doing the fighting
- If you are a small company fighting back against a big company, it is usually difficult to do.
- Large companies sometimes infringe a patent, knowingly or not, and then rely on their extensive legal teams and deep pockets to keep doing what they are doing as the case works its way through court or the smaller company settles to minimize their expenses.

Other examples of patent fighting

- Apple sued Microsoft for copying its graphical user interface (GUI). Outraged, Xerox sued Apple of copying the GUI from them. Apple lost the case and Xerox would have won but waited too long to sue!
  - https://en.wikipedia.org/wiki/Apple_Computer,_Inc._v._Microsoft_Corp.
- Nokia won patent dispute regarding touch-screen technology with Apple in 2011. It got an undisclosed one time payment and now receives 2% iPhone revenues. These are estimated to exceed $30 billion annually.
  - http://www.bloomberg.com/news/articles/2011-06-14/nokia-apple-payments-to-nokia-settle-all-litigation
- Oracle launched a case against Google, alleging Android infringes Java patents, claiming $6.1 billion in damages. On May 26, 2016, the jury found in favor of Google, calling the use of the Java API to be "Fair Use." Oracle plans to appeal.
  - https://en.wikipedia.org/wiki/Oracle_America,_Inc._v._Google,_Inc.
- Apple, Microsoft, Sony, Ericsson & RIM (BlackBerry) bought Nortel's entire patent portfolio in 2011 for $4.5 billion.
  - http://www.wsj.com/articles/SB10001424052702303812104576440161959082234
- Google acquired Motorola and all of it's mobile telephony patents in 2011 for $12.5 billion. In 2014, it sold Motorola to Lenovo, but kept the patents and the cash! This was done to protect Android from Samsung and others.
  - http://www.forbes.com/sites/gordonkelly/2014/02/10/how-google-used-motorola-to-smack-down-samsung-twice/#140eaf4653ab

How patents became the rocket fuel of technological entrepreneurship

- Bayh-Dole Act -1980 (named for Senators Birch Bayh (D) and Robert Dole (R))
  - Gave the patent rights for intellectual property created in university research funded by the federal government to Universities.
  - Prior to Bayh-Dole, the rights went to the Federal Government.
- In order for a patent to be valuable enough to cause an organization to invest the money to commercialize it, that industry needs to be assured that they have rights to use the IP and that others cannot easily imitate their work.
- Prior to Bayh-Dole, an enterprise could not be assured that they had protected rights to intellectual property.
  - Prior to the enactment of Bayh-Dole, the U.S. government had accumulated 28,000 patents, but fewer than 5% of those patents were commercially licensed.
- After Bayh-Dole, Universities got very good at licensing IP to industries. This gave the industries the protected rights that they needed and it also created a significant revenue stream for Universities and Government labs.

Patent Trolls

- As the number of patents, many for doubtful products and business methods, proliferated over the last few decades, another form of patent abuse began to arise.
- Companies with no other mission would simply buy up collections of existing patents and then find companies that they could sue while claiming the company was infringing their patents.
- Larger companies would often make the business decision that it would be cheaper to pay them off than it would be to fight them in court.
- These people are often known as “Patent Trolls” and one can debate whether that is fair or not.
  - http://en.wikipedia.org/wiki/Patent_troll
  - https://www.eff.org/issues/resources-patent-troll-victims
- Recent Supreme Court Decisions appear to be reducing the number of cases being filed.
  - http://www.motherjones.com/kevin-drum/2014/10/after-supreme-court-decision-patent-trolls-getting-cold-feet

Key patent issues

- In 2013 the US patent law was changed dramatically
- US converted from “First to Invent” to “First to file” in 2013.
  - For this reason you should be careful not to follow materials written under the old law, since that could invalidate your patent opportunities.
  - Before 2013, there was a lot of work being done to establish who first invented any particular patent. That was why documentation was so important.
  - Now this is no longer relevant. If you invent something and keep it secret and someone else finds out about it and files the patent, you will find it difficult to stop them.
  - The patent priority will go to the first to file.

- US recognizes any filing in any WTO country as establishing the same priority as if it was filed in the US.

  - Title 35 USC Section 119 (a) An application for patent for an invention filed in this country by any person who has, or whose legal representatives or assigns have, previously regularly filed an application for a patent for the same invention in a foreign country which affords similar privileges in the case of applications filed in the United States or to citizens of the United States, or in a WTO member country, shall have the same effect as the same application would have if filed in this country on the date on which the application for patent for the same invention was first filed in such foreign country, if the application in this country is filed within twelve months from the earliest date on which such foreign application was filed.

Patent Considerations

Prior to 2013 there was a lot of uncertainty in patent protection for natural products

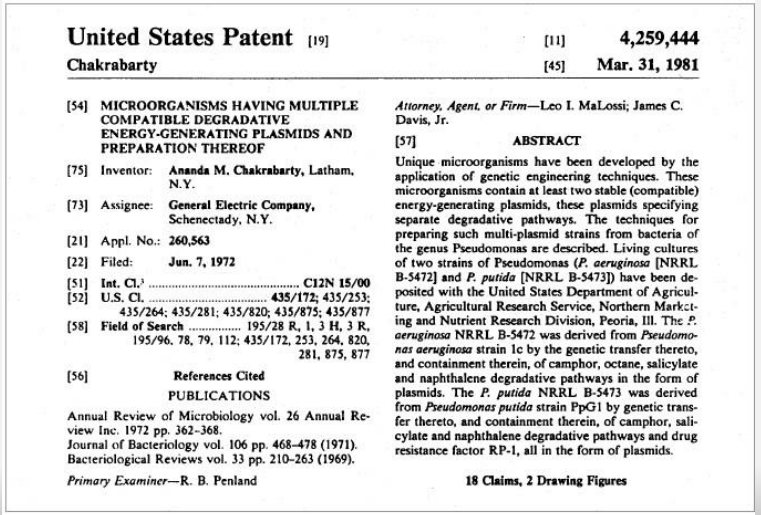
- Could naturally occurring genetic sequences be patented?
- Could a company patent its DNA amplification technique (scientific process)?
- Could the sequence of events constituting the test be patented?

The year 2013 was a big change in patenting law:

- Before 2013 genes could and were patented in the US
- After 2013 naturally occurring DNA could NOT be patented.
  - Synthetic “complementary DNA (cDNA)” however could be
    - cDNA does not occur in nature

Patenting Natural Products – 1980 Beginning

- "A live, human-made microorganism is patentable."
  - That declaration, made by Supreme Court Chief Justice Warren Burger on June 16, 1980, in the majority opinion in the case of Diamond v. Chakrabarty, upended a legal doctrine that had stood for nearly a century. The ruling was enormously important for the emerging biotechnology industry.
  - "It was, Burger wrote, both a manufacture, "a useful article produced from raw or prepared materials by giving to these materials new forms, qualities, properties or combinations," and a composition of matter, "a combination of two or more substances."
    - "Mr. Pseudomonas;" LSF Magazine; Fall 2015; p 40
      - http://biotechhistory.org/lsf-magazine/



United States Patent [19]
Chakrabarty

[11] **4,259,444**
[45] **Mar. 31, 1981**

[54] **MICROORGANISMS HAVING MULTIPLE COMPATIBLE DEGRADATIVE ENERGY-GENERATING PLASMIDS AND PREPARATION THEREOF**

[75] Inventor: **Ananda M. Chakrabarty**, Latham, N.Y.

[73] Assignee: **General Electric Company**, Schenectady, N.Y.

[21] Appl. No.: **260,563**

[22] Filed: **Jun. 7, 1972**

[51] **Int. Cl.**[3] **C12N 15/00**

[52] **U.S. Cl.** **435/172**; 435/253; 435/264; 435/281; 435/820; 435/875; 435/877

[58] **Field of Search** ..... 195/28 R, 1, 3 H, 3 R, 195/96, 78, 79, 112; 435/172, 253, 264, 820, 281, 875, 877

[56] **References Cited**
PUBLICATIONS

Annual Review of Microbiology vol. 26 Annual Review Inc. 1972 pp. 362–368.
Journal of Bacteriology vol. 106 pp. 468–478 (1971).
Bacteriological Reviews vol. 33 pp. 210–263 (1969).

Primary Examiner—R. B. Penland

Attorney, Agent, or Firm—Leo I. MaLossi; James C. Davis, Jr.

[57] **ABSTRACT**

Unique microorganisms have been developed by the application of genetic engineering techniques. These microorganisms contain at least two stable (compatible) energy-generating plasmids, these plasmids specifying separate degradative pathways. The techniques for preparing such multi-plasmid strains from bacteria of the genus Pseudomonas are described. Living cultures of two strains of Pseudomonas (*P. aeruginosa* [NRRL B-5472] and *P. putida* [NRRL B-5473]) have been deposited with the United States Department of Agriculture, Agricultural Research Service, Northern Marketing and Nutrient Research Division, Peoria, Ill. The *P. aeruginosa* NRRL B-5472 was derived from *Pseudomonas aeruginosa* strain 1c by the genetic transfer thereto, and containment therein, of camphor, octane, salicylate and naphthalene degradative pathways in the form of plasmids. The *P. putida* NRRL B-5473 was derived from *Pseudomonas putida* strain PpG1 by genetic transfer thereto, and containment therein, of camphor, salicylate and naphthalene degradative pathways and drug resistance factor RP-1, all in the form of plasmids.

18 Claims, 2 Drawing Figures

Cover page of patent #4,259,444 issued to Chakrabarty and General Electric in 1981

Limiting Patents of Human Products

- In 2013, Myriad Genetics tried to patent two genes: BRCA1 and BRCA2.
  - Mutations in either led to a great increase in the risk of breast cancer.
  - They also filed a patent for a test for the genes.
- The US Supreme court ruled unanimously that the genes were NOT patentable, but that the test was patentable. June 13, 2013
  - In some ways it was a return to the standards originating in 1889 in which natural products were deemed a product of nature that could not be patented.
  - "The Court struck down patent claims on genomic DNA that has been **merely "isolated**" from the body, where "isolated" means, well, "isolated"—removed and separated from its natural environment in the cell. More specifically, the Court held that genomic DNA does not meet the threshold test of patentable subject matter under section 101. It **upheld the subject matter status of cDNA**, which it defined as "synthetically created DNA . . . which contains the same protein-coding information found in a segment of natural DNA but omits portions within the DNA segment that do not code for proteins [introns]." Every patent drafted like Myriad's first and broadest claim—"an isolated DNA coding for [a specified protein]"—is now invalid. Conversely, claims limited to cDNA versions of genes continue to pass the threshold test, though they are still subject to scrutiny under all the other patentability requirements."
  - http://www.genomicslawreport.com/index.php/2013/06/18/myriad-finally-supreme-court-surprises-by-not-surprising/

Trademarks

- A trademark is any word, name, symbol, or device used to identify the source or origin of products or services and to distinguish those products or services from others.

CISCO SYSTEMS

EMPOWERING THE INTERNET GENERATION℠

ApplePay
iPad
iPod
iPhone
But not iWatch!

Microsoft Windows

- What does trademark law protect?
  - Pam Tarver just opened an information technology consulting company and has thought for a long time about what to name it. She finally settled on the fictitious name Infoxx. Infoxx is not a word; it is just a bunch of letters that Pam thought looked good together and her customers would remember. Is Pam's made-up word trademarkable?
  - Rick Sanford lives in a small community in northern Minnesota. He is planning to open the only fried chicken restaurant in his area and would like to trademark the words "fried chicken." Because of his special circumstances, can he do this?

What can be trademarked?

CISCO SYSTEMS

EMPOWERING THE INTERNET GENERATION℠

Name is trademarked

Symbol is trademarked
(and is a graphic representation of the Golden Gate Bridge)

Slogan is trademarked

What can be Trademarked?

Yang

The Trademark Law Protects:

- Words
  - Excluding:
    - Pure description of a product/service
    - Deceptive marks
    - A mark consisting primarily of a surname
- Numbers and letters
- Designs or logos
  - Must be distinctive rather than generic
- Sounds – Distinctive
- Fragrances – Cannot enhance the use of the product
- Shapes – No impact on the product's function
- Colors – not functional
- Trade dress
  - The manner in which a product or a business is "dressed up" to appeal to customers is protectable.

The Process of Obtaining a Trademark

- Select an appropriate mark, words, design, logo, sound, shape or other legal trademark
- Search the Trademark Office files to see if it is already in use.
- Register the trademark

- You can claim a trademark even if you do not register it, but the protection may not be as complete.

Why Register a Trademark?

- Technically, a trademark does not need to be registered to receive protection and to prevent other companies from using a confusingly similar marks.
- So why to register a trademark with the USPTO?
  - To get a National priority
  - To use of registration mark ®
  - To Block import of infringing products
  - Improve prospects in legal action for damages

Copyrights

- Copyrights
  - A copyright is a form of intellectual property protection that grants to the owner of a work of authorship the legal right to determine how the work is used and to obtain economic benefits from the work.

- What is Protected by a Copyright?
  - Literary works
  - Musical compositions (and derivative works)
  - Dramatic works
  - Pantomimes and choreographic works
  - Pictorial, graphic, and sculptural works

How to Obtain a Copyright

- Copyright law protects any work of authorship the moment it assumes a tangible form. Technically, it is not necessary to provide a copyright notice or register work with the U.S. Copyright Office.
- The following steps can be taken, however, to enhance copyright protection.
  - Copyright protection can be enhanced by attaching the copyright notice, or "copyr  t bug" to something.
  - Further protection can be obtained by registering the work with the U.S. Copyright Office.

Characteristics of Patents, Trademarks, and Copyrights

Let's compare the various ways that you might try to protect your intellectual property:

IP Type	What It Covers	Time Required	Cost
Copyright	Works of original authorship	About 2 weeks	About $35-65
Trademark	Logos, names, etc.	6 months to 1 year	$900-1500
Design patent	The look of an original product	Up to 2 years	$5000-20000
Utility patent	How an original product works	2-5 years	$5000-20000
Business method patent	A business process or procedure	2-5 years	$5000-20000

Trade Secrets

- A piece of knowledge that confers an advantage on a firm and is protected by non-disclosure
- Protect a competitive advantage without disclosing how an underlying technology works
- There are some disadvantages
  - **Must** be kept hidden to remain valuable
  - Doesn't provide a monopoly right
  - To enforce and claim damages in court, must show a loss of competitive advantage
- What qualifies for trade secret protection
  - Is not known outside the company
  - Is known only inside the company on a "need to know" basis
  - Is safeguarded by stringent efforts to keep the information confidential
  - Is valuable and provides the company a compelling competitive advantage
  - Was developed at great cost, time, and effort
  - Cannot be easily duplicated, reverse engineered, or discovered.
- If you don't take active steps to protect it, then you lose it.

Coca Cola keeps its formula in a vault

What Qualifies for Trade Secret Protection?

- Jack Young is the CEO of a small graphic design company in Orlando, Florida. Several months ago, he spent an entire day searching the Web site of Dolphin Graphics, a larger graphics design firm in Miami. From its Web site, Jack was able to put together a list of Dolphin's major customers and is using the list to prospect new customers for his firm. After discovering what Jack is doing, Dolphin has threatened to sue Jack if he doesn't stop using its customer list, which it claims is a trade secret. Is Jack infringing on Dolphin's trade secrets?

How to Protect Trade Secrets

Here are some of the actions that you should take to maintain a trade secret:

- Restricting access
- Labeling documents as secret and confidential
- Password protecting confidential computer files
- Maintaining logbooks for visitors
- Maintain logbooks for access to sensitive material
- Maintaining adequate overall security measures
- Asking the employees to sign nondisclosure and non-compete agreements.