

Introduction: Intellectual Property Rights and Patenting

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Intellectual Property (IP): What is it?



- Legal concept
- Creations of the mind: discoveries, inventions, literary and artistic works, symbols, names, images, designs

Intellectual Property Rights (IPR)

Two categories:

1. Protect the **form or expression** of the creation:

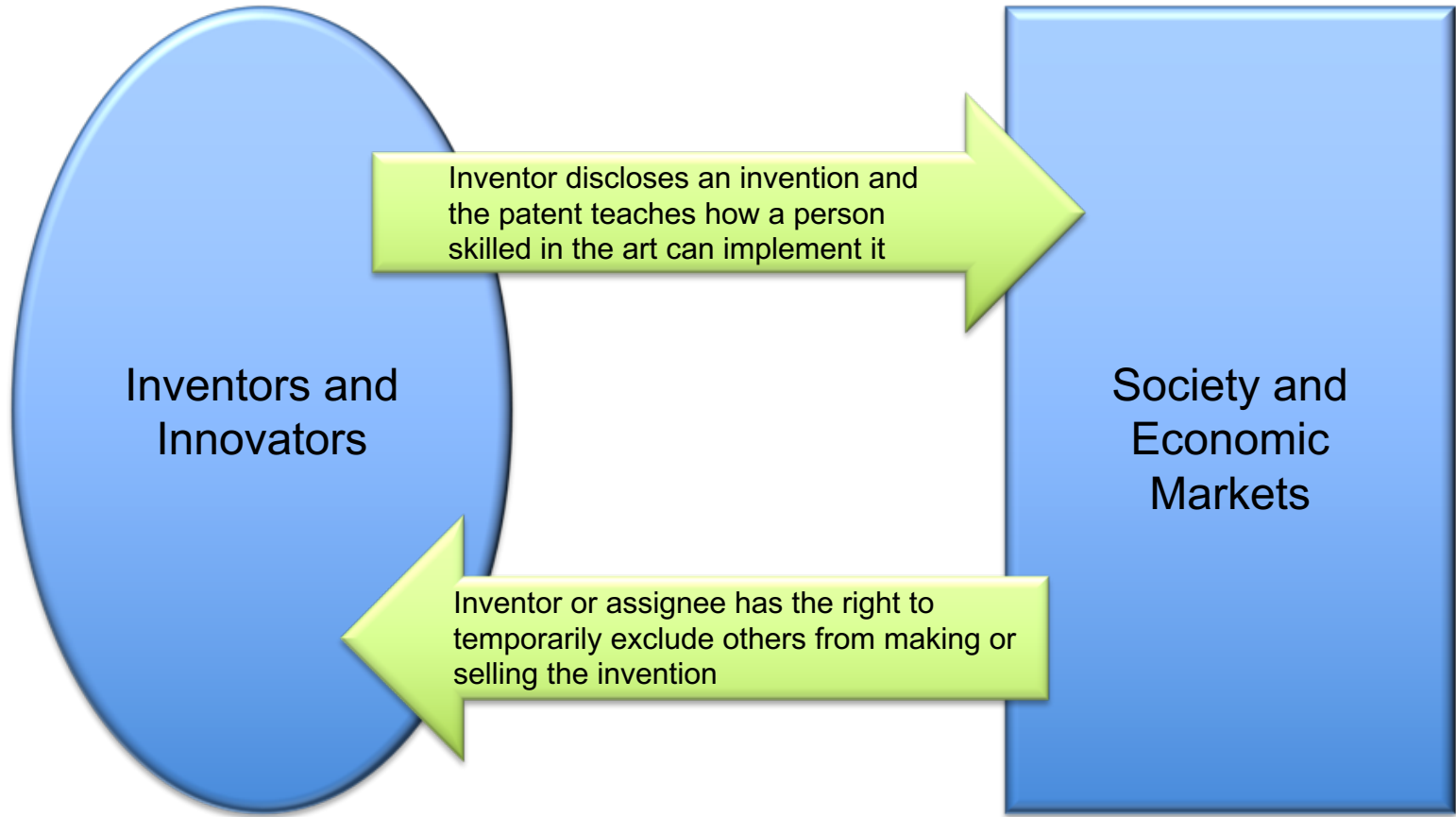
- Industrial Designs (Design Patents in the US)
- Trademarks / Trade Names
- Copyright

2. Protect the **essential aspects** of the IP (**technical solution**):

- Patents (Utility Patents in the US)
- Utility Models
- Integrated Circuit Layouts
- Geographic Indication of Source (e.g. only a fermented drink from the region of Champagne can be called “Champagne”)

Why do patents exist?

A patent is a deal between inventors and society.



Patent incentives to society

- Patent system was set up to encourage people to disclose their inventions, rather than keep them as trade secrets
- System is supposed to generate more overall innovation and compensate inventors for their innovations

Patents reward and encourage practical discovery and innovation

Patents provide incentives to individuals by offering them recognition for their creativity and material reward to their marketable inventions. These incentives encourage innovation, which assures that the quality of human life is continuously enhanced.

World Intellectual Property Organization: www.wipo.int



Patents do not grant...

- The right to **manufacture** a specific product or technology
- The right to **sell** a specific product or technology
- The right to **import or export** a specific product or technology
- The right to **use** a specific technology in a product



Patent rights are exclusionary

- The only right a patent gives to the holder is the **right to exclude** others from manufacturing, copying, selling, importing or using an invention without the owner's permission
- A patent holder may choose to sell a licence to another party, enabling that party to manufacture, copy, sell, import or use the patent holder's technology without legal enforcement against the licensee



Patent rights are territorial

- Patents are issued by patent offices in their respective countries and grant exclusionary rights **only** within the geographic jurisdiction of the country's patent office
- The World Intellectual Property Organization (WIPO) provides the ability to file global patent disclosure documents. **There is no such thing as a global patent.**
- The European Patent Office (EPO) has the authority to grant patents within the countries comprising the European Union
 - Once a European Patent is granted, it needs to be “activated” in order to give the holder patent rights
 - Activation of a European Patent is done on a country-by-country basis and must be done for each country in which patent protection is desired

Patents can be valuable

The New York Times

By NICK WINGFIELD
Published: August 24, 2012

Jury Awards **\$1 Billion** to Apple in Samsung Patent Case



What the Verdict Said

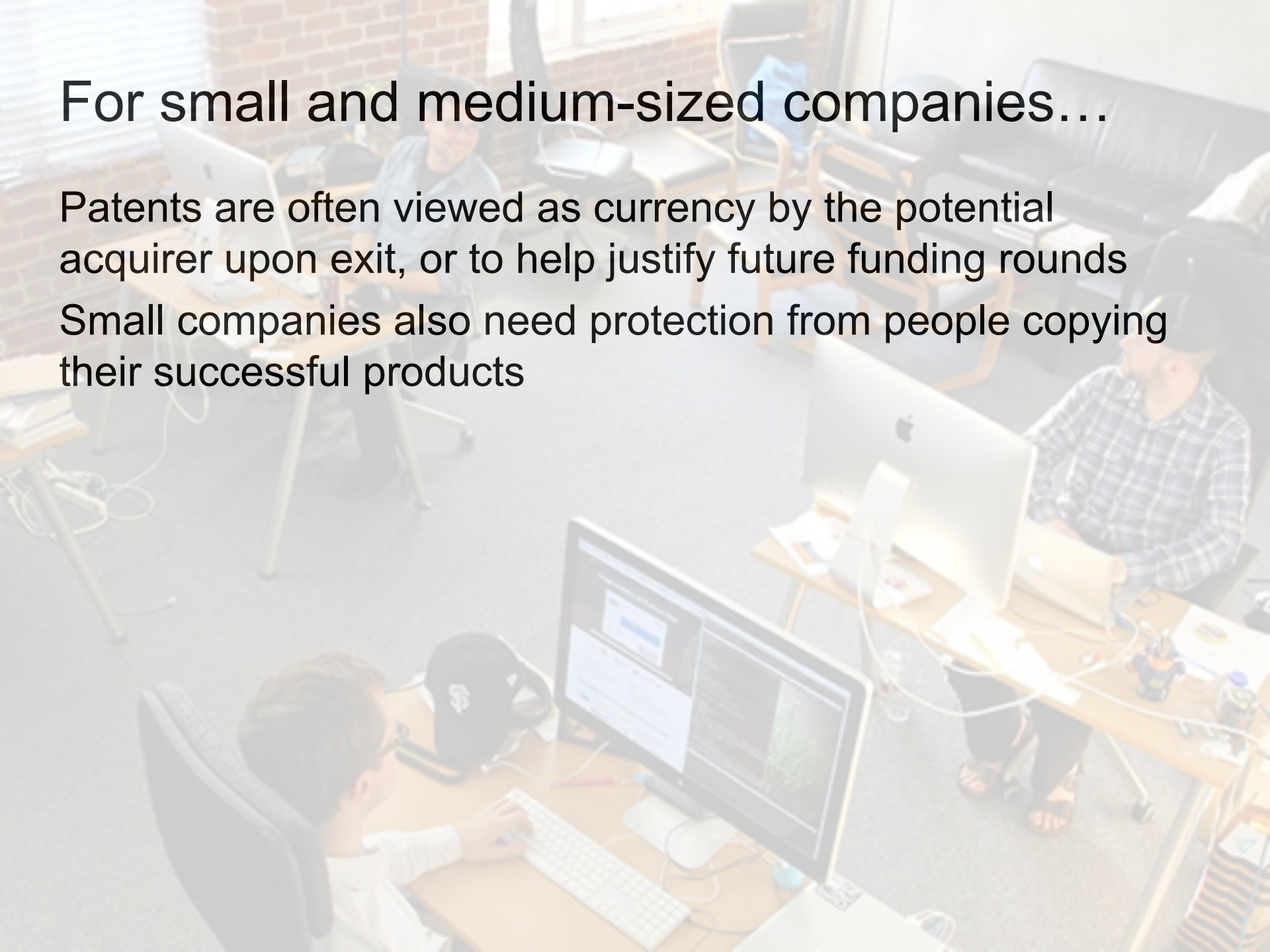
- * Samsung violated a series of Apple's patents related to the software and design of mobile devices.
- * Apple's patents were valid.
- * Apple did not violate any of Samsung's patents.
- * Apple was awarded \$1 billion in damages.



For small and medium-sized companies...

Patents are often viewed as currency by the potential acquirer upon exit, or to help justify future funding rounds

Small companies also need protection from people copying their successful products





For large companies...

Patents are a different kind of currency – patents can be swapped with competitors to neutralize large financial liabilities in the event that a competitor's patent covers another company's product or technology offering

Patentability

- Scope of protection and requirements are highly dependent on national laws. Nevertheless, there are some general, universal principles:
 - **Novelty**: new in view of the prior art
 - **Inventiveness**: non-obvious, involving an inventive step with respect to the prior art
 - **Industrial Application**: applicable to a product or process; it cannot be a mere mental act or thought experiment, e.g. an idea is not an invention
- Patent laws usually require sufficient disclosure so that someone skilled in the art such as an average technician can implement the invention, thereby reducing it to practice
- Patent offices usually conduct an examination on each patent application to check whether the conditions for patentability are met

Exclusions from patentability

Most legal systems and international treaties exclude the following items from patentability:

- **Discoveries** of materials or substances already existing in nature
- **Scientific theories** or **mathematical methods**
- **Plants and animals** other than microorganisms, and essential biological processes for the production of plants and animals.
- **Schemes, rules or methods**, such as those for doing business, performing **purely mental acts** or playing games – an exception is the business method patent permitted in the United States
- **Aesthetic creations**

Practical criteria for patenting

Not all ideas are worth the time and expense. Following are some reasonable criteria that can be used as filters to help decide if an idea is worthy of a patent filing:

- ✓ **Novelty:** What is the closest prior art? How does the invention extend existing art?
- ✓ **Reduction to practice:** Does the invention teach how an apparatus is constructed, or how to implement a method? If it is just an idea, it's not an invention, and the inventor would be instructed to reduce it to practice.
- ✓ **Utility value:** Is the invention useful? Does it solve a real problem?
- ✓ **Business value:** Does the invention solve a problem incident to the firm's current or future business, or an adjacent area?
- ✓ **Detectability:** If the invention were implemented, e.g. in a competitor's product, a network, etc., how easy is it to detect infringement? Can you readily observe if the invention is being used by simple visual inspection, or do you need specialized analytics and equipment?
- ✓ **Claims-breadth:** Does the invention refer to a single, narrow idea or can it be broadly applied?
- ✓ **Possibility of standards contribution:** Is it something completely new that could be standardized in an existing standards body? Is the invention a potential fix for a problem in a standardized technology? Is it something you can see your competitors doing?

A design patent protects the form of a product

United States Design Patent
Patent No. US 6,493,229 B2
Date of Patent May 10, 2005

Publication number USD504889 S1
Publication type Grant
Application number US 29/201,636
Publication date May 10, 2005
Filing date Mar 17, 2004
Priority date Mar 17, 2004

Inventors Bartley K. Andre, 13 More »
Original Assignee Apple Computer, Inc.



FIG. 1

Utility patent protects an underlying technology and may be applied to many products

(54) SYSTEM FOR ENABLING RECEIPT OF A PAGER MESSAGE FROM A MOBILE STATION

(71) Inventors: Mark Edward Pecen, Dallas, Tex.; Marcia E. Otting, Mesquite, Tex.

(72) Assignee: Motorola, Inc., Schaumburg, Ill.

(51) Int. Cl. Class. H04B 1/00

(52) U.S. Class. 455/420

(53) Field of Search 455/420, 455/421, 455/422, 455/423, 455/424, 455/425, 455/426, 455/427, 455/428, 455/429, 455/430, 455/431, 455/432, 455/433, 455/434, 455/435, 455/436, 455/437, 455/438, 455/439, 455/440, 455/441, 455/442, 455/443, 455/444, 455/445, 455/446, 455/447, 455/448, 455/449, 455/450, 455/451, 455/452, 455/453, 455/454, 455/455, 455/456, 455/457, 455/458, 455/459, 455/460, 455/461, 455/462, 455/463, 455/464, 455/465, 455/466, 455/467, 455/468, 455/469, 455/470, 455/471, 455/472, 455/473, 455/474, 455/475, 455/476, 455/477, 455/478, 455/479, 455/480, 455/481, 455/482, 455/483, 455/484, 455/485, 455/486, 455/487, 455/488, 455/489, 455/490, 455/491, 455/492, 455/493, 455/494, 455/495, 455/496, 455/497, 455/498, 455/499, 455/500, 455/501, 455/502, 455/503, 455/504, 455/505, 455/506, 455/507, 455/508, 455/509, 455/510, 455/511, 455/512, 455/513, 455/514, 455/515, 455/516, 455/517, 455/518, 455/519, 455/520, 455/521, 455/522, 455/523, 455/524, 455/525, 455/526, 455/527, 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Number	US6714781 B2
Publication type	Grant
Application	US 10/000,566
Publication date	Mar 30, 2004
Filing date	Oct 23, 2001
Priority date	Mar 31, 2000
Fee status	Paid

Inventors Mark Edward Pecen, Marcia Otting
Original Assignee Motorola, Inc.



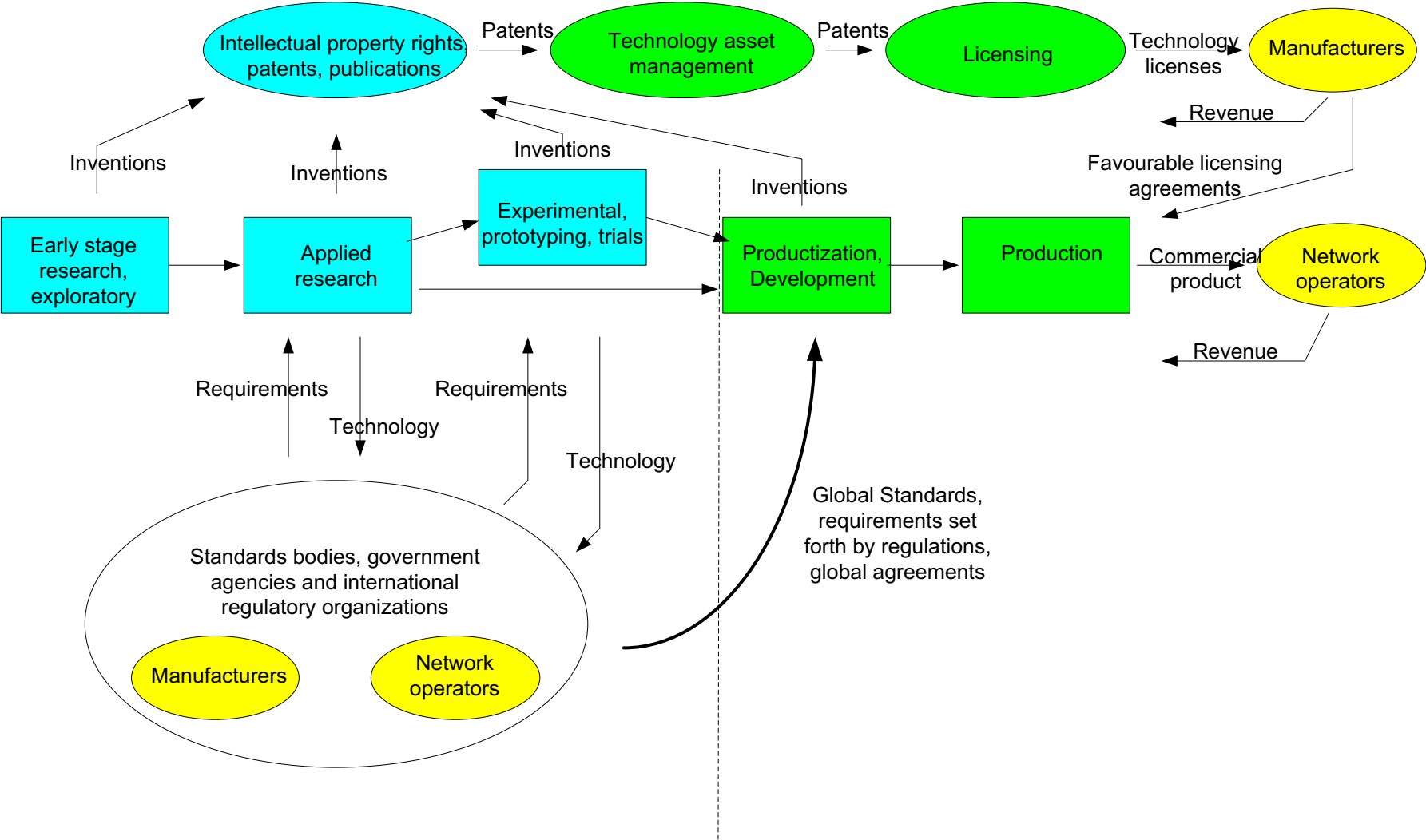
Patents and business

- Many highly successful companies build the patenting process into their **value chain**
- Whether a company integrates patenting and licensing depends on:
 - Available **resources**
 - Amount of **liability** from competitors
- Large companies usually invest heavily in patenting and **licensing**
- It's also appropriate for small companies to invest in patenting technologies that are key to their products or services

Qualcomm's downstream value chain



Large wireless network manufacturer



Many parallel value chains

- Frequently, a small company develops a technology and creates a **patent portfolio** around it
- The small company needs a **partner** for larger-scale implementation of their technology
- Their **patent portfolio** helps protect their technology from infringement and may also serve as an incentive for a partner to share



Patent portfolios



- A **grouping** of patents
- A general portfolio may comprise all the firm's patents, but a useful way to view the general portfolio is that it comprises multiple **smaller portfolios of like inventions**
- It is generally true that having a patent portfolio comprising a single patent supports insufficient protection, because it may be practical to fund an invalidation campaign against a single patent, depending on how high the stakes might be to a competitor
- A practical patent portfolio for a given area should contain between **5 and 30 patents**
- Fewer than 5 to 8 patents in the same area may be a bit risky, but having more than 30 in the same portfolio is usually not needed

Patent prosecution

Patent prosecution is the formal legal procedure of protecting an invention, from the filing of a patent application to its issuance

- Drafting of specification part
- Drafting of claims
- Producing drawings
- Filing
- Responding to patent office notices (office actions)
- Amending claims
- Filing continuations
- Paying issuance fees
- Paying maintenance fees



Patent timelines

- Patent rights usually **last 20 years** from the first effective filing date (the priority date)
- Different countries may require more rigorous examination, e.g. EU, and therefore tend to take more time to issue patents
- The US Patent and Trademark Office (USPTO), in recent history, tends to grant patents that meet qualifications in about 4 years
- The European Patent Office (EPO) historically issues qualified patents in 5 to 8 years



Public disclosure



- In most countries, once an inventor has publicly disclosed an unpatented invention, it no longer qualifies for patenting, and becomes prior art for inventions in the same field
- In the US, an applicant has 12 months in which to file for a patent subsequent to any public disclosure of the invention
- Patent offices also publicly disclose patent applications, whether or not a patent is granted

Good rules regarding disclosure



File for a patent first



Disclose to public later, e.g. book, paper, lecture, meetings with external partners, etc.

Where to file?

- Patent prosecution can be an expensive procedure and varies in the countries where the patents are filed
- Consideration should be given to:
 - Where the firm is doing business, or intends to do business geographically in the future
 - Geographic areas occupied by competitors
 - Enforceability of patents in certain countries

CANADA



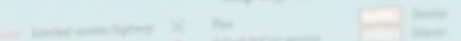
NATIONAL
GEOGRAPHIC

SCALE 1:7,500,000

1 centimeter = 39 kilometers, 1 inch = 126 miles



Map Legend



Costs of patenting

- A patent attorney who knows the technology in consideration
- Filing fees
 - Each country has its own schedule of filing fees
- Issuance fees
 - There is usually a fee to issue a granted patent
- Maintenance fees
 - Each country imposes a fee in order to keep the patent enforceable over the 20 year period
 - Fees occur at intervals over the 20 year period
 - These fees may vary widely among countries, and can be substantial amounts



The new European unitary patent!

- The European Commission has introduced the concept of a “unitary” patent
- Something like a U.S. patent, in that there’s no need to activate the patent in the various countries of the EU
- Once issued, the holder of a unitary patent can enforce the patent throughout the 28 participating European states
- Litigation can be heard by a single, unified patent court
- The unified patent is in effect as of 20 January 2013, but litigation has not yet been heard
- One needs to request unitary treatment when filing in EU

Cost-effective filing

- Provisional
 - Inexpensive public disclosure that some countries allow
 - May take the form of a memorandum or patent specification with or without claims
 - **Applicant has 12 months** to promote this provisional to a full utility patent filing
- WIPO filing
 - WIPO is the U.N. intellectual property authority
 - Decisions are treaty binding in the 193 member countries
 - Not a global patent, but a global disclosure of invention with the intent of promoting to patent
 - **Applicant has 30 months** to promote the WIPO filing to a regular utility patent application

A global patent database

- Verify your filings:
- <http://worldwide.espacenet.com/?locale=en>
[EP](#)

Summary



- Patents provide exclusionary rights – right to exclude
- Patents are often viewed as a currency for sale, trade or licensing
- Because of their broad scope, patents are a preferred vehicle for technology companies to protect their interests
- Patents and licensing often function as separate parallel value chains in certain companies
- Patent portfolios should be deliberately constructed to protect a firm's key areas of business
- Patents are territorial – each country has its own scope of enforcement
- There is no such thing as a global patent
- Patent prosecution can be expensive – choose wisely the countries in which to file
- Consider first a WIPO filing, and consider promoting in 30 months