INTELLECTUAL PROPERTY: Tools For Economic Development

Yumiko Hamano
Partner
ET Cube International

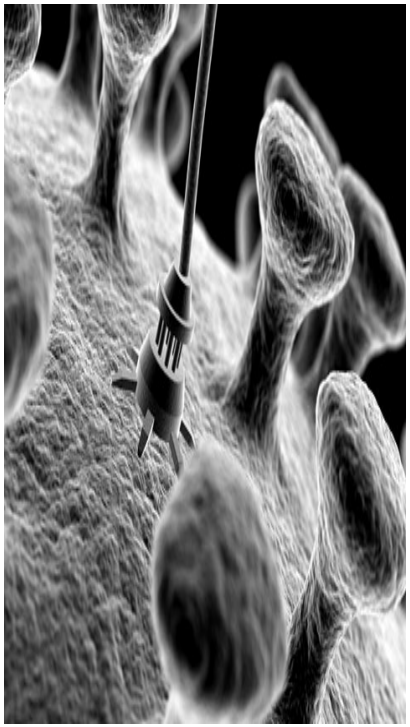
© 2016 Yumiko Hamano

Topics

- WIPO
- IP and Economic Development
- Patent
- Other types of IP (Trade secret, TM, Industrial Design, Copyrights,)

<u>Additional Information</u>

- Patent Information Search
- Patent Cooperation Treaty (PCT)



© Yumiko Hamano

About Me

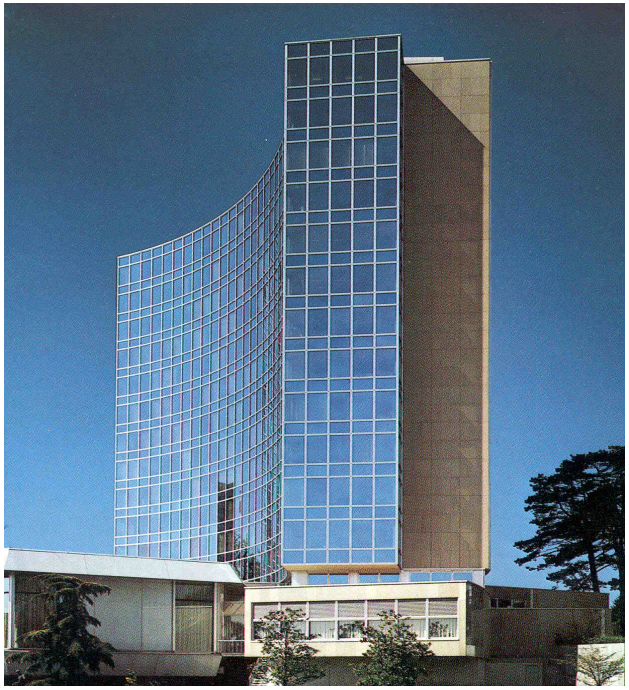
- 27+ years at World Intellectual Property Organization (WIPO)
- 13 years dealing with Patent Cooperation Treaty (PCT)
- Supervised PCT Japanese operations of processing PCT international patent applications
- Trilateral (EPO, JPO and USPTO) Technical Cooperation Coordinator from WIPO
- PCT IPER technical translation (10+ years)
- 14+ years dealing with Innovation, Technology Transfer and IP Commercialization
- Assisted 300+ universities worldwide in IP and Technology Mgt.
- Assisted in development of 30+ Institutional IP policies/ 50+ establishment of TTOs
- 170+ IP Mgt. training workshops/seminars/conferences
- Dealt with governments of 185 countries
- IP Consultant/Forming a company "ET Cube International" - IP commercialization/ Entrepreneurship consulting and training services
- LLM in Intellectual Property Law
- MBA specialized in Management in International Organizations

© 2016 Yumiko Hamano

WIPO

"Dedicated to developing balanced intellectual property systems that encourage creativity and contribute to the economic/ cultural/social development"

- One of 17 United Nations Specialized Agencies
- Headquarters located in Geneva, Switzerland
- 185 Member States
- Administration of 25 international treaties
- Some 1,500 employees



© 2016 Yumiko Hamano

What is IP?

ET International

Creations of the mind:

1. Industrial property

- patents (inventions)
- utility models
- trade secret
- Trademarks (TM)
- industrial designs
- geographic indications (GI)
- new plant varieties
- Traditional Knowledge (TK)

2. Copyrights

IP rights

Protected by National and International Laws

© Yumiko Hamano

S&P 500 Companies

ET International

Over 80% of market value of S&P500 companies today is based on their intangible assets

Intangible assets

(knowledge based assets)
e.g.

- Patents
- Trademarks
- Design
- Brand

>

Tangible assets

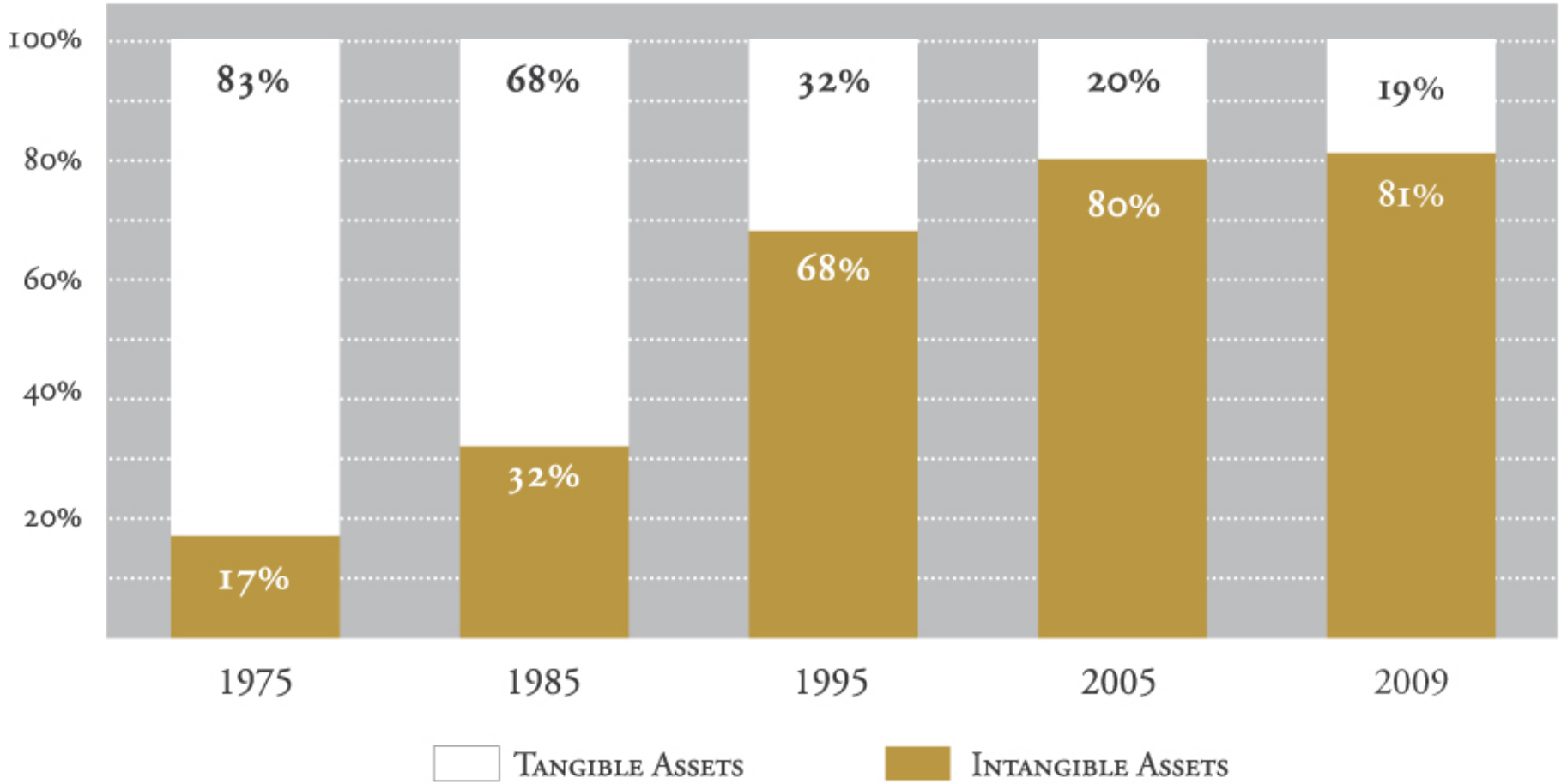
(physical assets)
e.g.

- Real estate
- Equipment
- Cash

© 2016 Yumiko Hamano

ET International

Components of S&P 500 Market Value

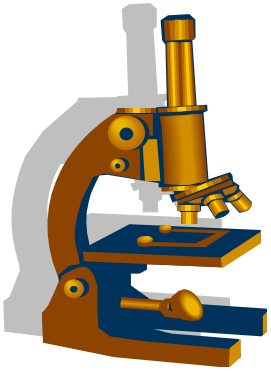


Source: Ocean Tomo

© 2016 Yumiko Hamano

From Laboratory to Market

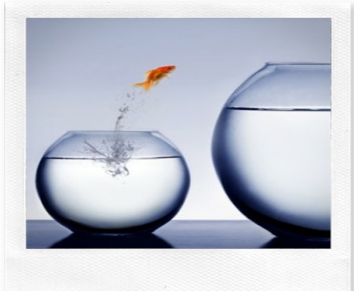
ET International



R&D

Patent application

Licensing



Start-up/ Spin-off

Commercialization

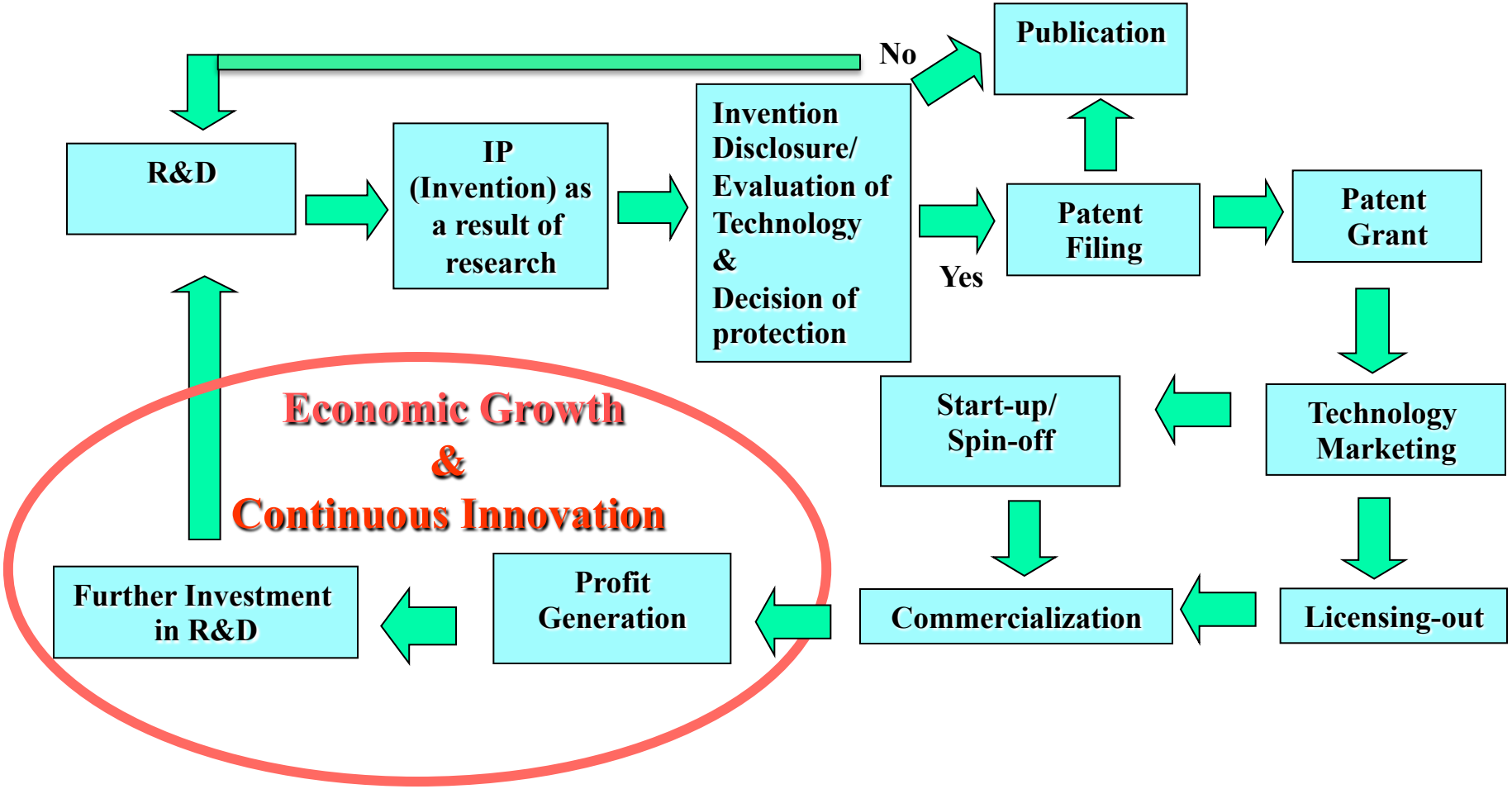
Technology Transfer

CREATION | PROTECTION | EXPLOITATION

© 2016 Yumiko Hamano

Source: Yumiko Hamano, From Laboratory to Market

Innovation and Economic Growth Cycle



Source: Yumiko Hamano, "Innovation and Economic Growth Cycle

© 2016 Yumiko Haano

Business Paradigm Shift - Globalization

ET International

- ICT: Internet/ Social media/ Smartphone➔ Easy access to information/ Easier communication
- Limited geographic barriers
- Global market
- Competitive market
- Need to improve efficiency
- Need to improve quality
- Constant generation of new technologies
- Fast technology cycle
- Technology interdependency ➔ Need to collaborate
- Highly knowledge/technology driven economy

NEED TO INNOVATE !!!!

© 2016 Yumiko Hamano

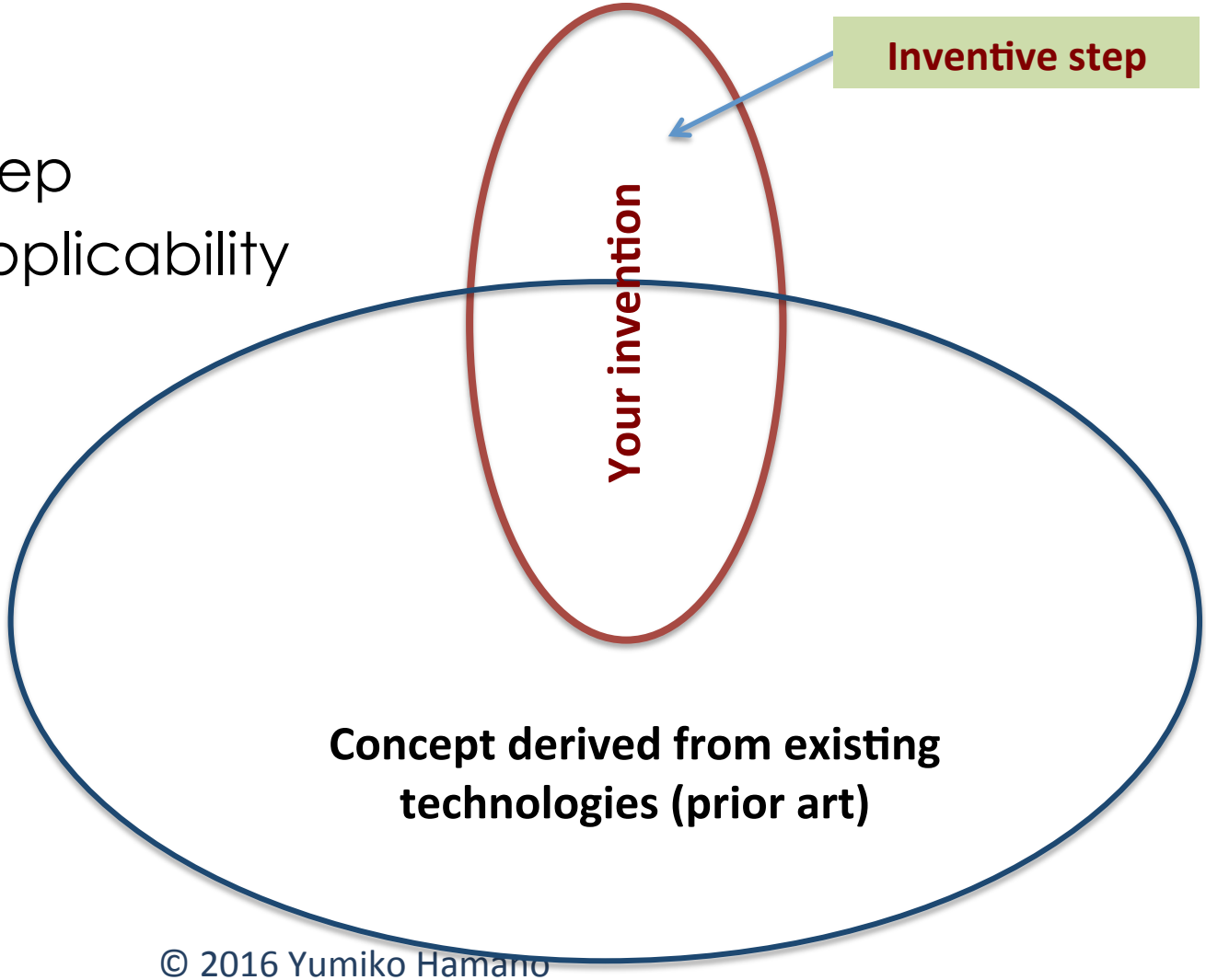
Patent

- A right granted by a state to the owner of an inventor, to exclude others from making, using, selling or importing in the territory without the inventor's consent
- Granted to an invention of process, method, device, machine, compound, composition, and improvements thereof
- In exchange for a disclosure of specification of the invention
- Limited period, 20 years in many countries
- Territorial

© 2016 Yumiko Hamano

Patent
Legal Requirements

1) Novelty
2) Inventive Step
3) Industrial Applicability



© 2016 Yumiko Hamano

Patent

- Publication vs. Patents
- Grace period v. Absolute novelty
- Provisional patent application
- Utility Models/Petty patents
- Inventor/Applicant

© 2016 Yumiko Hamano

How Many Patents Are there in an Apple iPhone ?

ET International

Trademarks: 292
Copyright
Industrial Design

Apple Market value: 800+ B

1298 Apple Mobile Patents (2002 - 2012)

• iPhone, Smartphone General	416
• Camera	279
• User Interface	232
• Image Display/ Screen	149
• Battery/ Power Control	88
• Antenna	75
• Calendar	31
• Contact Management	15
• Voice Control	5

In the Ultra Competitive Marketplace: Apple Revenue exp $200+ Billion in 2015!!!

© 2016 Yumiko Hamano

How are inventions invented?

- Identifying a need or problem
- Through finding a creative way to solve a specific technical problem
- Improving existing technologies
- Applying a better understanding of nature:

© 2016 Yumiko Hamano

<VELCRO>

invented by George de Maestral (Swiss Chemist)

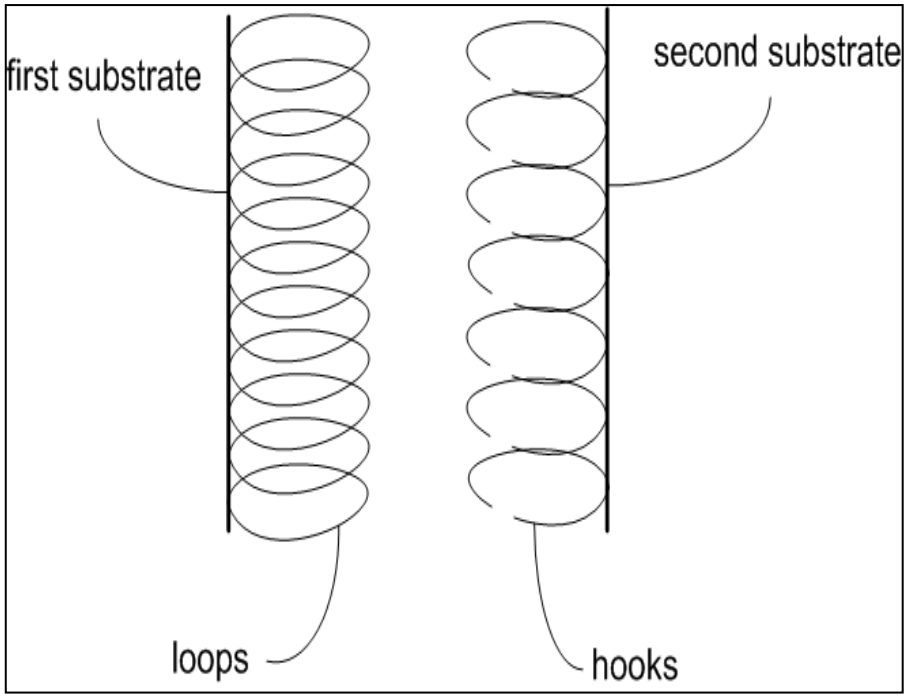
© 2016 Yumiko Hamano

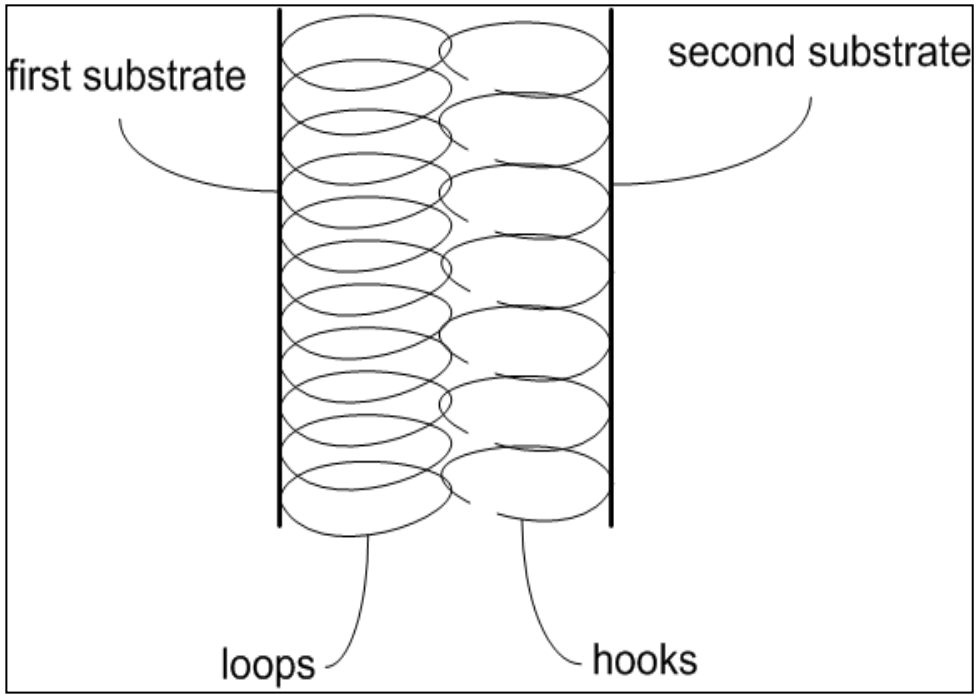
Velcro

prior art: Cockleburrs

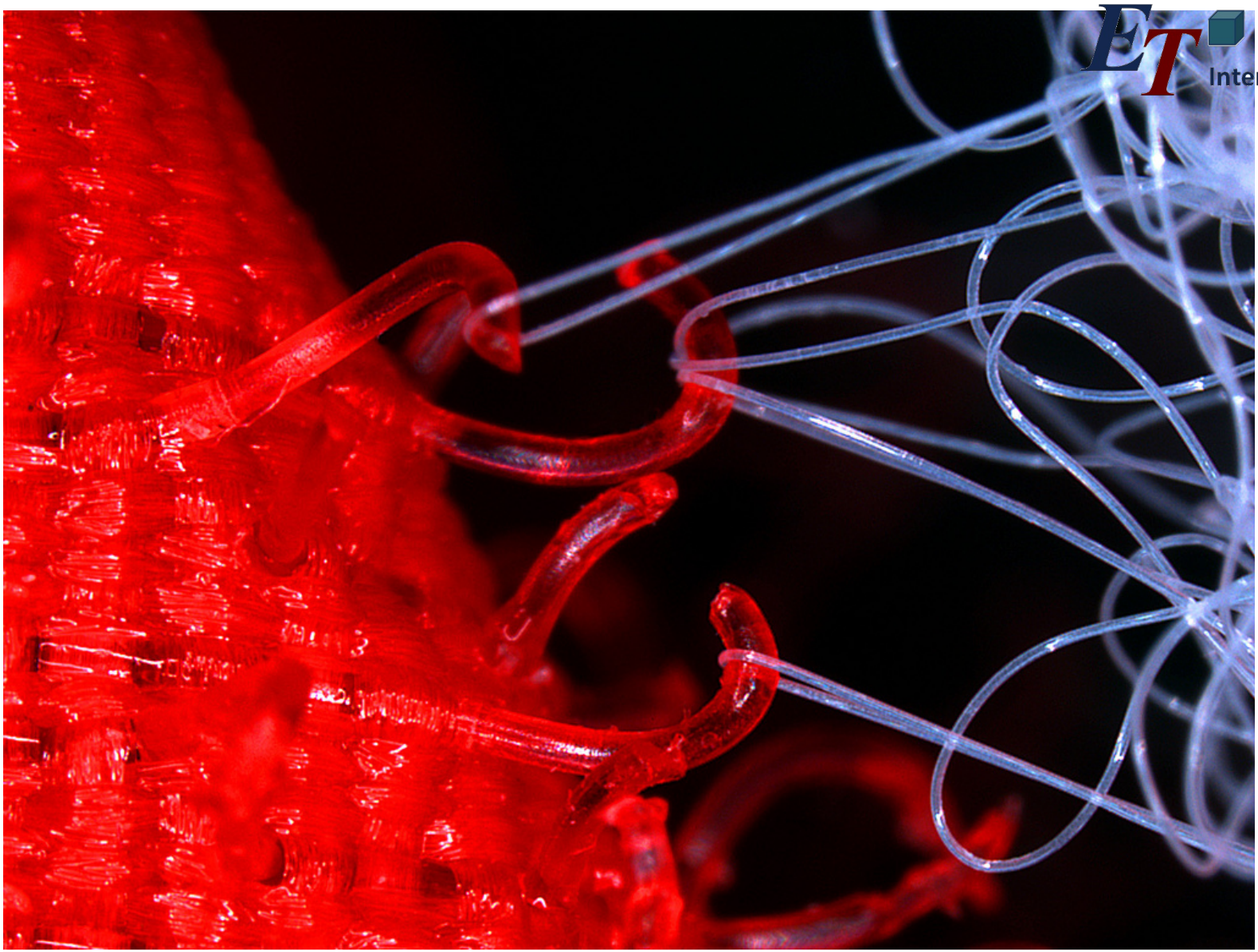
© 2016 Yumiko Hamano

synthetic resin





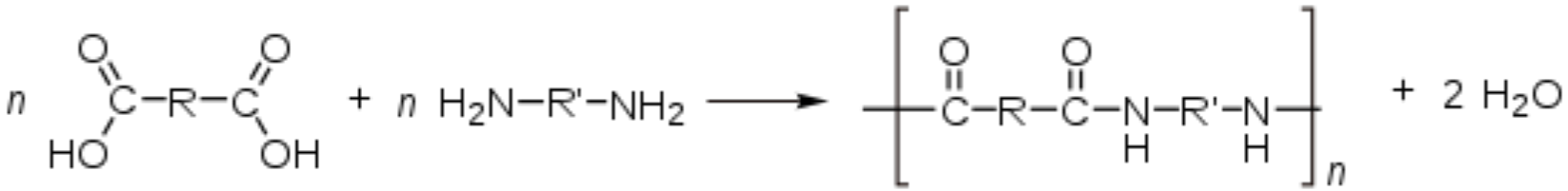
© 2016 Yumiko Hamano



© 2016 Yumiko Hamano

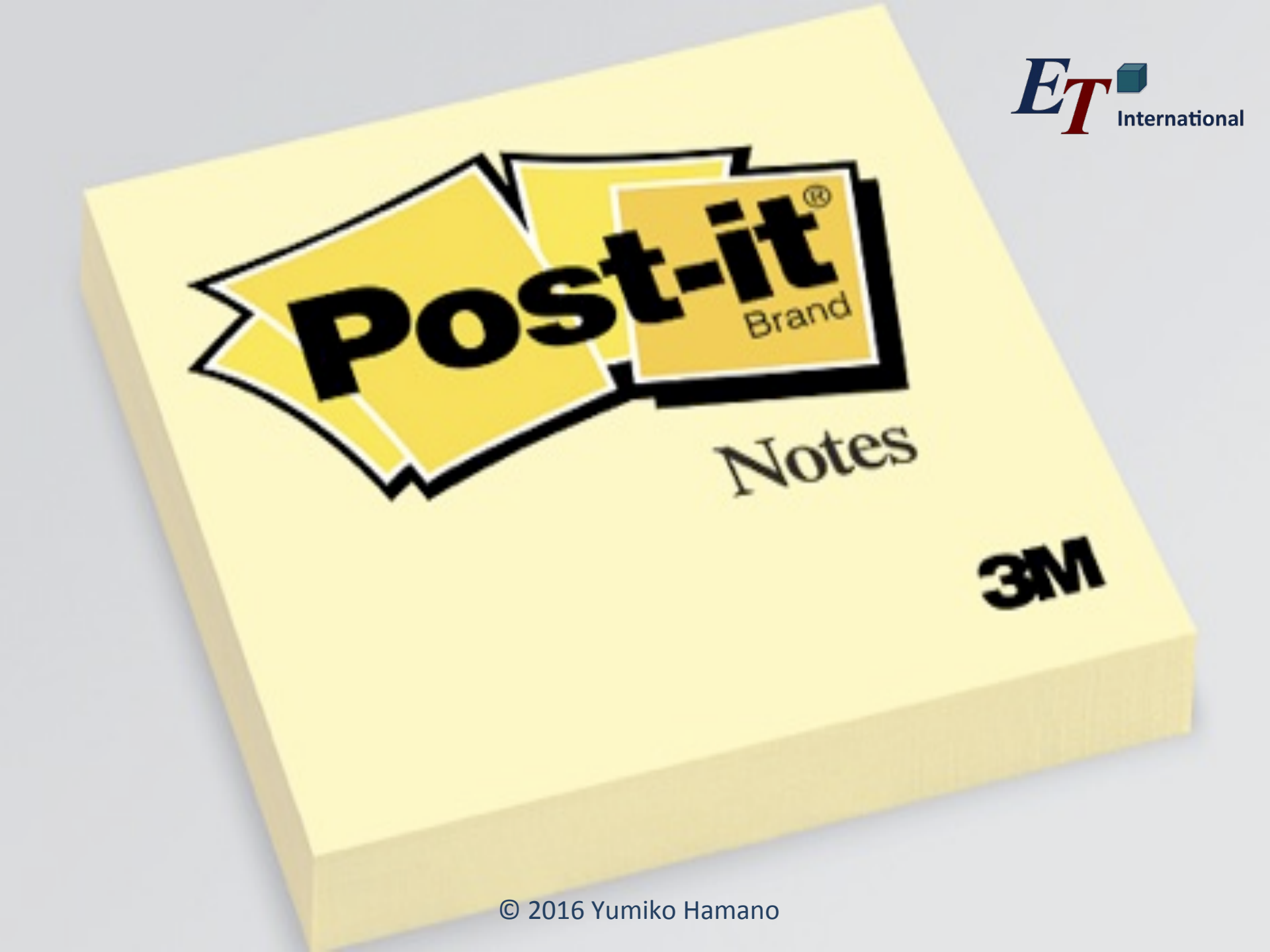
Synthetic Resin That Forms Hooks and Loops

- Long chain synthetic polymeric amide with recurring amide groups as an integral part of the main polymer chain
- Formed by reacting equal parts of a diamine and a dicarboxylic acid:



where R = 4C and R' = 6C alkanes.

© 2016 Yumiko Hamano



ET International

© 2016 Yumiko Hamano

ET International

« Necessity is the mother of invention »

© 2016 Yumiko Hamano

ET International

Baby Mop

© 2016 Yumiko Hamano

Image source: Google

Benefits of Patents

Patents:

- Provide **incentives** by **recognizing** for the **creativity** and reward exclusive right
- Provide strong competitive advantages (high quality and profitable products, revenue, licensing royalty)
- Encourage **innovation**
- **Stimulate** fair competition in the **market**
- Contribute to **economic development**
- Foster **technological advancement**

© 2016 Yumiko Hamano

Patent is certainly important for big companies….

ET International

But patent is even more important for small businesses and start-ups, because:

- The patent may be the only **competitive advantage**
- Essential **to find investors and commercialization partners or obtain access to enabling technologies**
- Investors typically view **patents as insurance** for their investment
- The value of a small company's patents may therefore be **a crucial factor** in the decision of a venture capitalist or other investor to invest in a company.
- Strong patents may also be used as **bargaining chips** for licensing, sales and business collaboration opportunities

© Yumiko Hamano

Trade Secrets

ET International

Trade Secrets

- Any confidential information with independent economic value not in public domain (often know-how of designs, manufacturing method)
- Any information belonging to an entity that is neither readily known nor readily ascertainable outside the entity

Examples of Trade secrets:

- Formulas, patterns, processes, methods, compilations, customer lists, etc.
- Secret formula for making Coca Cola®

(Coca Cola company holds formula as trade secret)

© Yumiko Hamano

Trade Secrets

ET International

Advantage

- No time limit for protection
- No patent filing costs

Disadvantage

- Protection only as long as secret is kept as secret
- Legally protected only where third parties have obtained the confidential information by illegitimate means (spying, economic espionage, stealing information etc.)
- No uniformed laws of trade secret. Many countries do not have any legal framework for trade secrets protection
- Limited protection i.e., companies are often less interested in licensing trade secrets compared to patents

© Yumiko Hamano

Trademarks

- Type of IP in the form of a word, name, symbol, or device used to identify goods
- Indicates the origin of the goods
- Provides public assurance
- Distinguishes the goods from those of others
- Used to prevent others from using a similar mark that would likely confuse consumers
- Cannot prevent others from making, using, or selling same type of goods
- Only protects the mark (*e.g.*, a name) that identifies the good or services and not the goods themselves
- Strong and effective tool for branding

© Yumiko Hamano

Industrial Designs

- Protection for ornamental features associated with articles used in commerce
- Limited uniformity world-wide in requirements and scope of protection available
- Design patents in some countries
- Protection of industrial design and patent protection not mutually exclusive in some countries

© 2016 Yumiko Hamano

Copyrights

- Protection provided to the creators of “original works of authorship”
- Literary, dramatic, photographic, musical, artistic, and other works, both published and unpublished
- Protects expression of ideas rather than idea itself
- Right arises automatically at creation

© 2016 Yumiko Hamano

Copyrights

- Protection in a tangible form
- Gives owner exclusive right to
  - Copy
  - Reproduce
  - Prepare derivative works
  - Distribute copies of work
  - Perform work publicly
  - Display work publicly

© 2016 Yumiko Hamano

Copyrights

Important IP right for protecting computer software and algorithms

- When patenting is not available, then copyright often becomes the strongest form of protection that can be obtained in the information technology field
- A piece of software might not rise to a sufficient degree of novelty and inventive step for patent protection
- In many jurisdictions computer software is not patentable “per se”

© 2016 Yumiko Hamano

Benefits of IP

ET International

Micro level

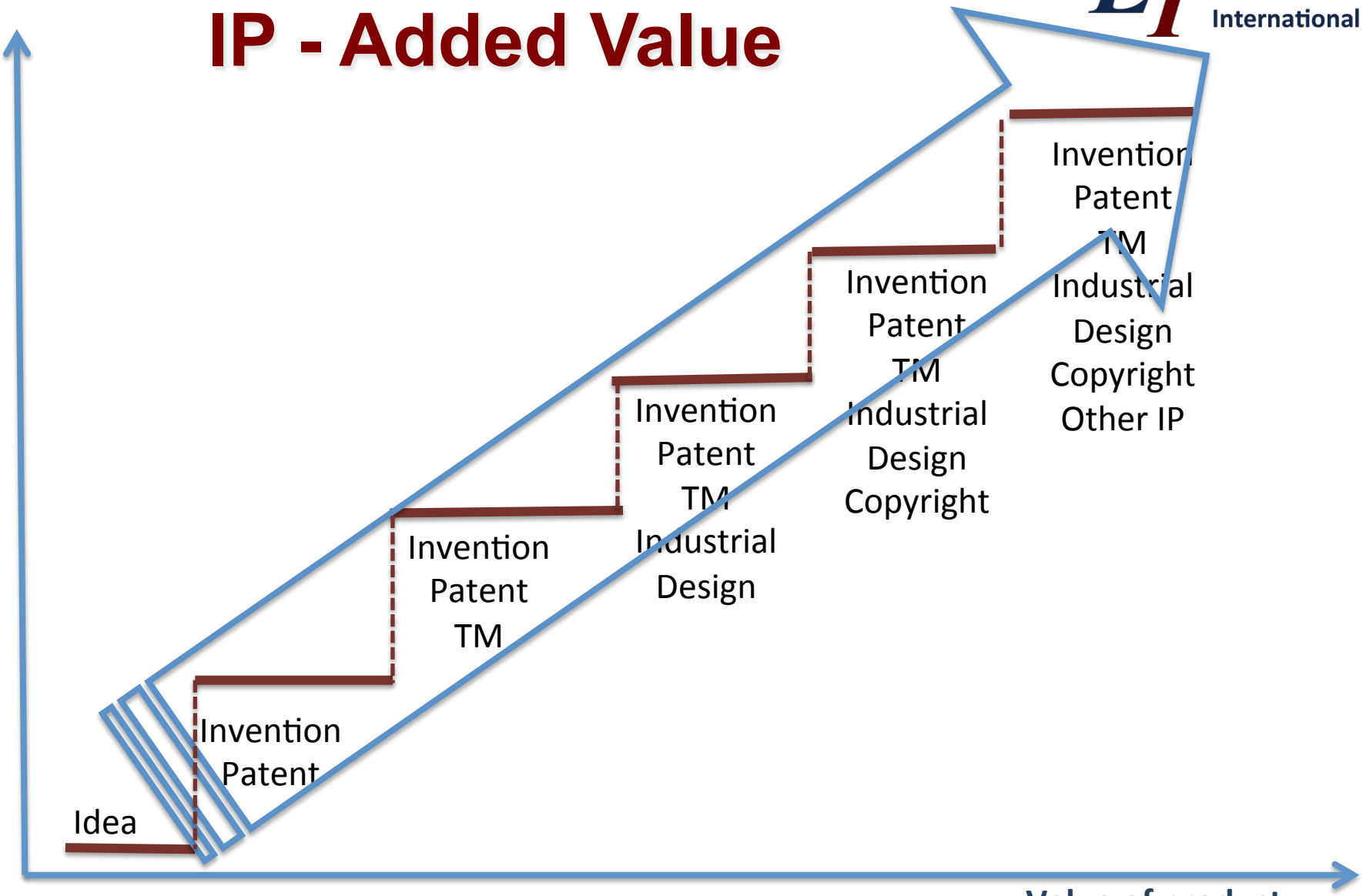
- Build strong portfolios of IP as a source of competitive advantage
- Strong and effective tool for branding and marketing
- Enhance corporate value
- Provide incentives and recognition of creativity
- Enables to distinguish your products from others (products/services of high value)
- Avoid and defend against litigation

Macro level

- Increase national competitiveness and GDP
- Enhance exports of high value
- Stimulate R&D and Promote S&T
- Reduce brain drain by providing incentives
- Help address national/global issues
- Develop national brand, cultural identity and reputation
- Attract FDI and local investment
- Job creation

© 2016 Yumiko Hamano

IP - Added Value



© 2016 Yumiko Hamano

Some Recap

- What are three criteria of patentability?
- How long does a patent generally last?
- What are the differences between patent and industrial design?
- Can software code be protected by patent?
- Give examples of different types of IP that you can see in the water bottle.
- Once you get a patent in your country no one else can have the same patent anywhere in the world. True or false?
- An inventor is who a new idea. True or false?
- Anyone who files patent application is considered an inventor. True or False?

© 2016 Yumiko Hamano

ET International

Thank you for your attention

yhamano309@gmail.com
Yumikoh@etcube.com

Major Patent Information Database

- EPO Publication
  - e.g.,Esp@cenet (80 million documents from 60 countries)
- JPO Publication
  - e.g., JPO IPDL, F-Term
- USPTO Publication
  - e.g., USPTO IPDL, Cassis
- WIPO PCT Publication
  - e.g., PatentScope, IPC
- Google

© 2016 Yumiko Hamano

Information on IP

ET International

WIPO web site:
www.wipo.int

WIPO University Initiative web site:
www.wipo.int/uipc/en

PCT Applicant Guide
http://www.wipo.int/pct/en/appguide/

PCT Newsletter
www.wipo.int/en/newsletter/index.jsp

PCT Gazette
www.wipo.int/pct/fr/gazette/

PCT on WIPO webpage
www.wipo.int/pct/en

© 2016 Yumiko Hamano

Patent Information Search

ET International

Characteristics of Prior Art Information

- Information includes all published scientific and technical information including patent application documents
- Rich in information on cutting-edge technologies
- Concrete description and specific technological information
- Presentation and data elements based on WIPO standards (uniformed structure)
- Can be freely used to support research
- Problem solving approach

© 2016 Yumiko Hamano

Patent Information Search

ET International

Characteristics of Prior Art Information

- Industry oriented information
- Identifies competition in early stage
- Information on legal status of patent applications
- Essential tool for successful IP protection, licensing and marketing, commercialization
- 80+ million documents made available free of charge on Internet

© 2016 Yumiko Hamano

Fields of Search

	Search Fields
Number	Priority, Application, Publication, Patent grant Nos.
Date	Dates of Priority, Application, Publication, Grant, etc.
Name	Applicant, Inventor, Agent, Examiner
Country	Priority Application country, Application Country, Designated States, etc.
Patent Classification	IPC, ECLA, FI, F-Term, UPC
Keywords	Title, Abstract, Claims, Description
Reference	Cited documents, Patent Family

© 2016 Yumiko Hamano

Useful Links – Patent Search

ET International

http://www.wipo.int/patentscope/en/

http://ep.espacenet.com/

http://www.piug.org/vendors.php

http://www.wipo.int/classifications/ipc

© 2016 Yumiko Hamano

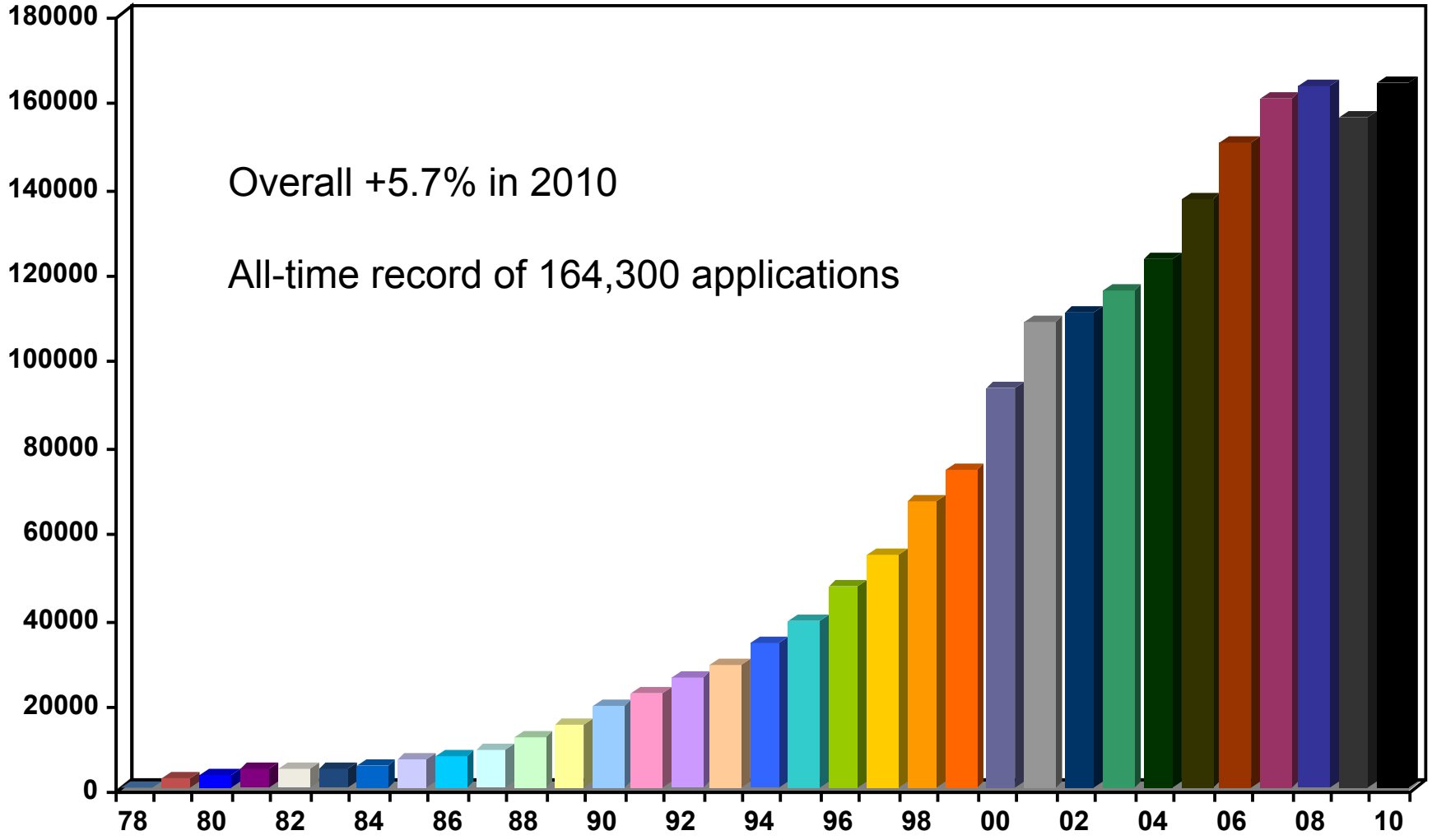
ET International

Patent Cooperation Treaty (PCT)

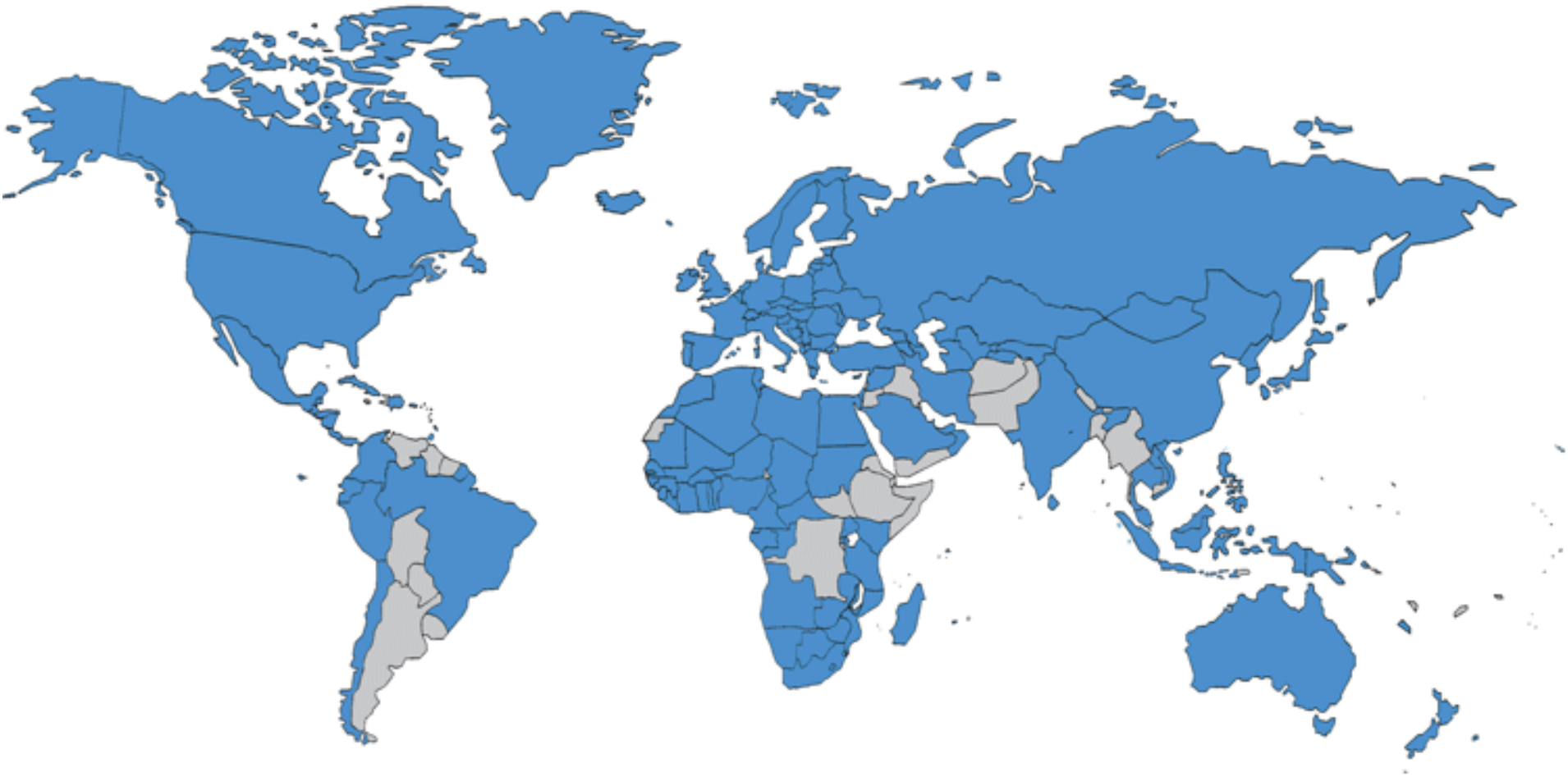
- An international treaty administered by WIPO
- 148 PCT member states of Paris Convention countries
- Makes it possible to seek patent protection by filing a single "international" patent application instead of filing several separate national or regional applications.

© 2016 Yumiko Hamano

PCT Statistics



© 2016 Yumiko Hamano

Patent Filing Contracting States

148 as of November 2013