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ENGLISH SEMINAR OF INTELLECTUAL PROPERTY

BY IP GRADUATE SCHOOL UNION

Intellectual Property in ICT filed

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Profile

Career

2010.4 – NOW Graduate School of Intellectual Property, Nihon University

2005.4 – 2010.3 NTTData Intellilink Corp.

1988.7 – 2005.3 NTT DATA Corp.

1976.4 – 1988.7 Nippon Telegraph and Telephone Republic Corp.
(Now : NTT Corp.)

Work experience

- R&D: Operating System of the Mainframe or terminals,
  Communication processing, Multimedia communication protocol,
  Internet
- Research management
- legal work, general affairs

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1. Overview of the ICT and Intellectual property

What is “ICT” ?

ICT = Information and Communication Technology

the use of computers and other electronic equipment and systems to collect, store, use, and send data electronically

[Cambridge Business English Dictionary]

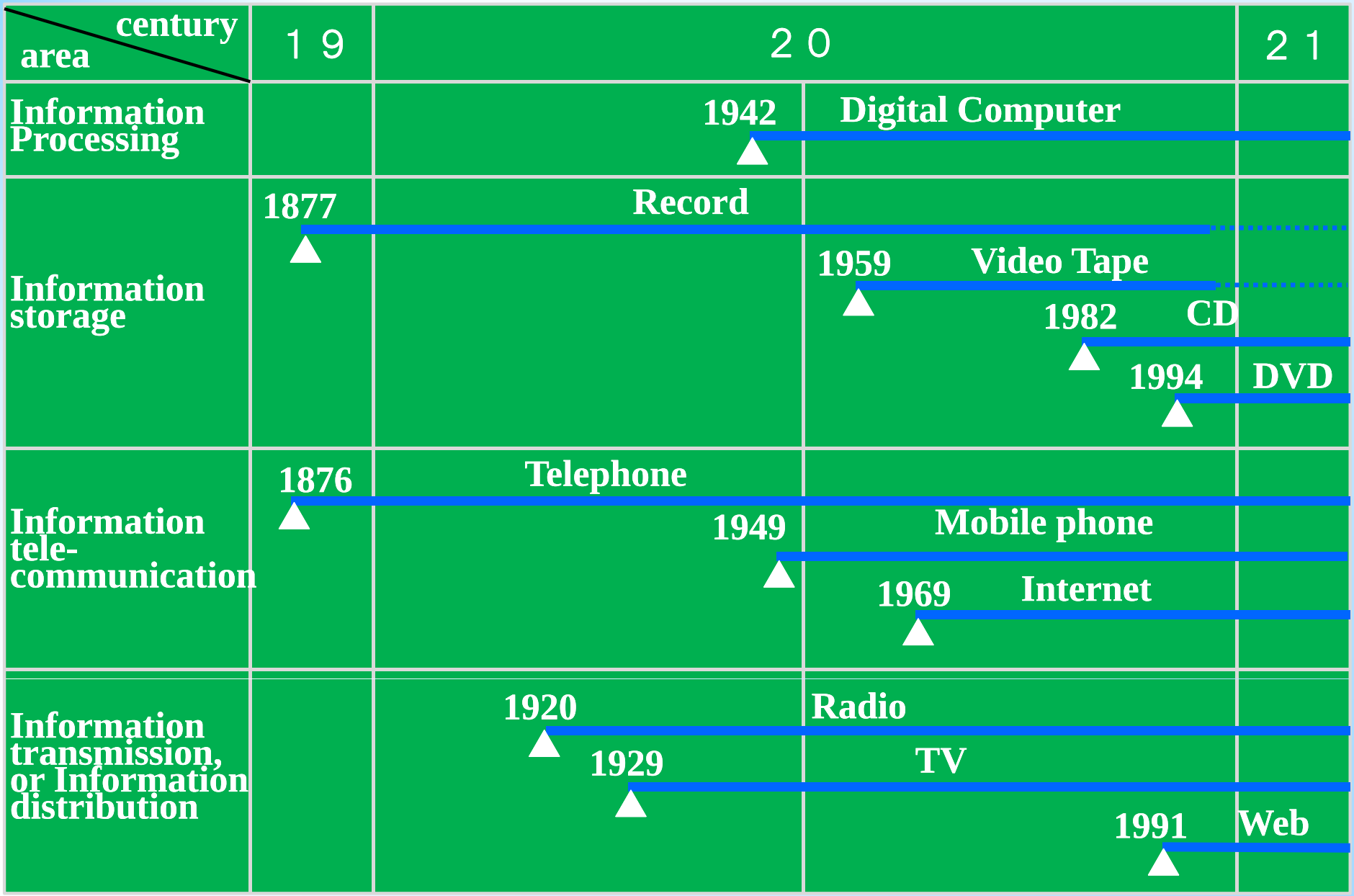
< My Definition >

Technologies which help humans' thinking action, to input, output, store, process and send information

Technology Area of the ICT

Area	Outline	Example
Information Processing	The equipment for processing information, or a material	Computer, Server, Memory, etc.
Information storage	The medium which stores information, and related services	Recording medium such as Hard disc, Record, Video, USB-memory Database
Information telecommunication	Transmission media of information, and related services	Telegraphic communication and a telephone, WAN, LAN, Internet, Mobile, etc.
Information transmission, or Information distribution	The downstream of the information for viewing and listening, or transmission	Radio, TV, CATV, Web, etc.

Start point of some devices or services



Business Area of the ICT

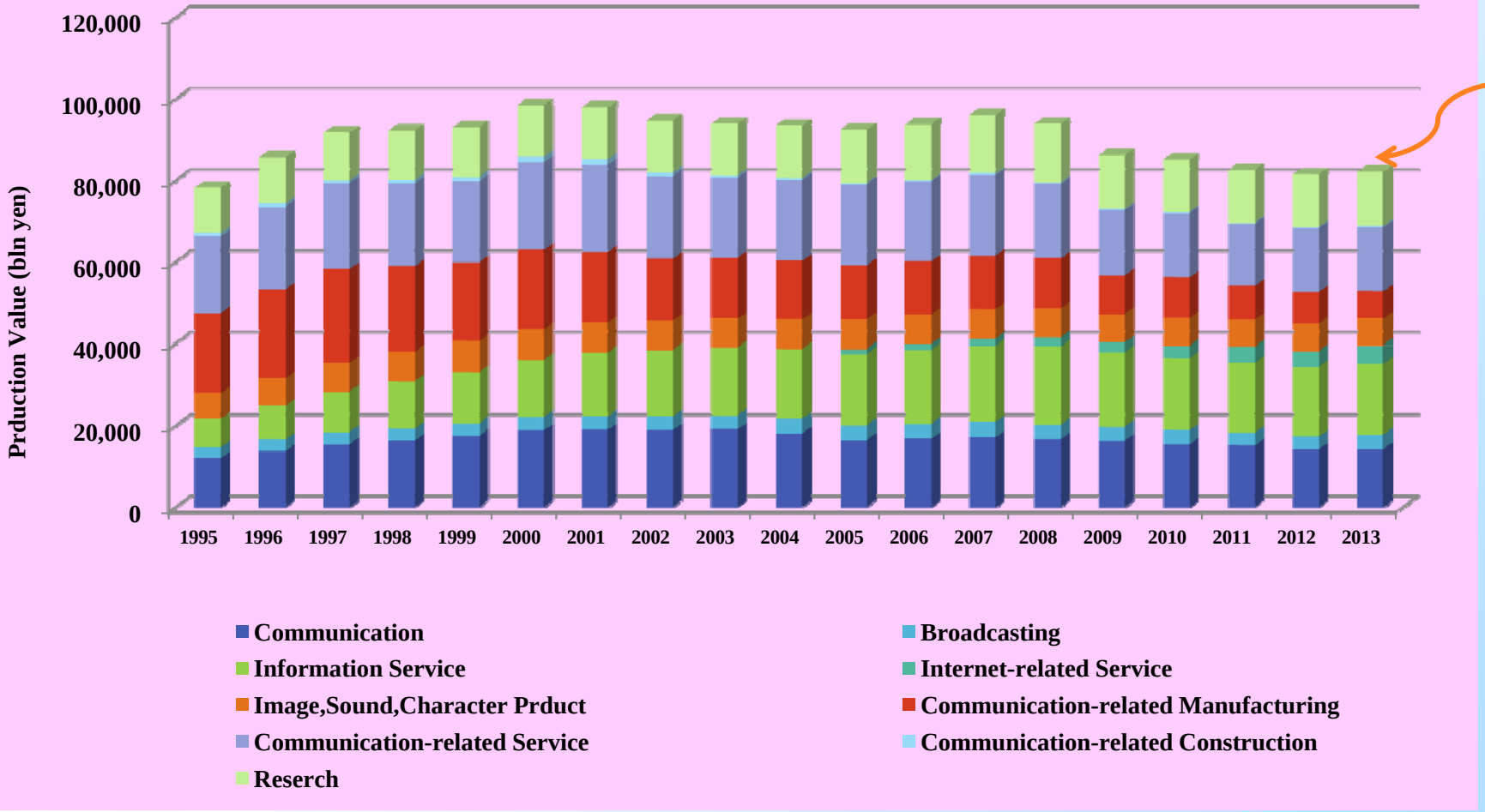
Area	Outline	Business type
Communication	Delivery of letters, or to perform the installation and operation of the means for transmitting the information by wired or wireless etc.	postal system, telecommunications, mobile
Broadcasting	The broadcasting business by telecommunications equipment, such as a wireless or wired	TV stations, radio stations
Information Service	Computing services, such as creating a package program of the computer, creating a customized program of computer for customers, or a variety of data collection, processing, storage, and provision	Software, Data processing and information services
Internet-related Service	Provide the Internet services	ISP

Business Area of the ICT

Area	Outline	Business type
Image/ Sound/ Character Product - Contents industry -	Product or distribute the movie or video, to issue of the newspaper, or to perform a publication such as journals or books	Film Production, Newspaper, Publication
Communication-related Manufacturing	Product related to information and communication	Wired and wireless equipment, mobile phone, computer, etc.
Communication-related Service	Services related to information and communication other than the above	Rental of communication equipment, Advertisements
Communication-related Construction	Construction of the constructs related to telecommunications line facilities	Telecommunications facility construction
Research	Research related to ICT	Research

Industrial scale of the ICT

Market Size of the ICT (Nominal / Japan)

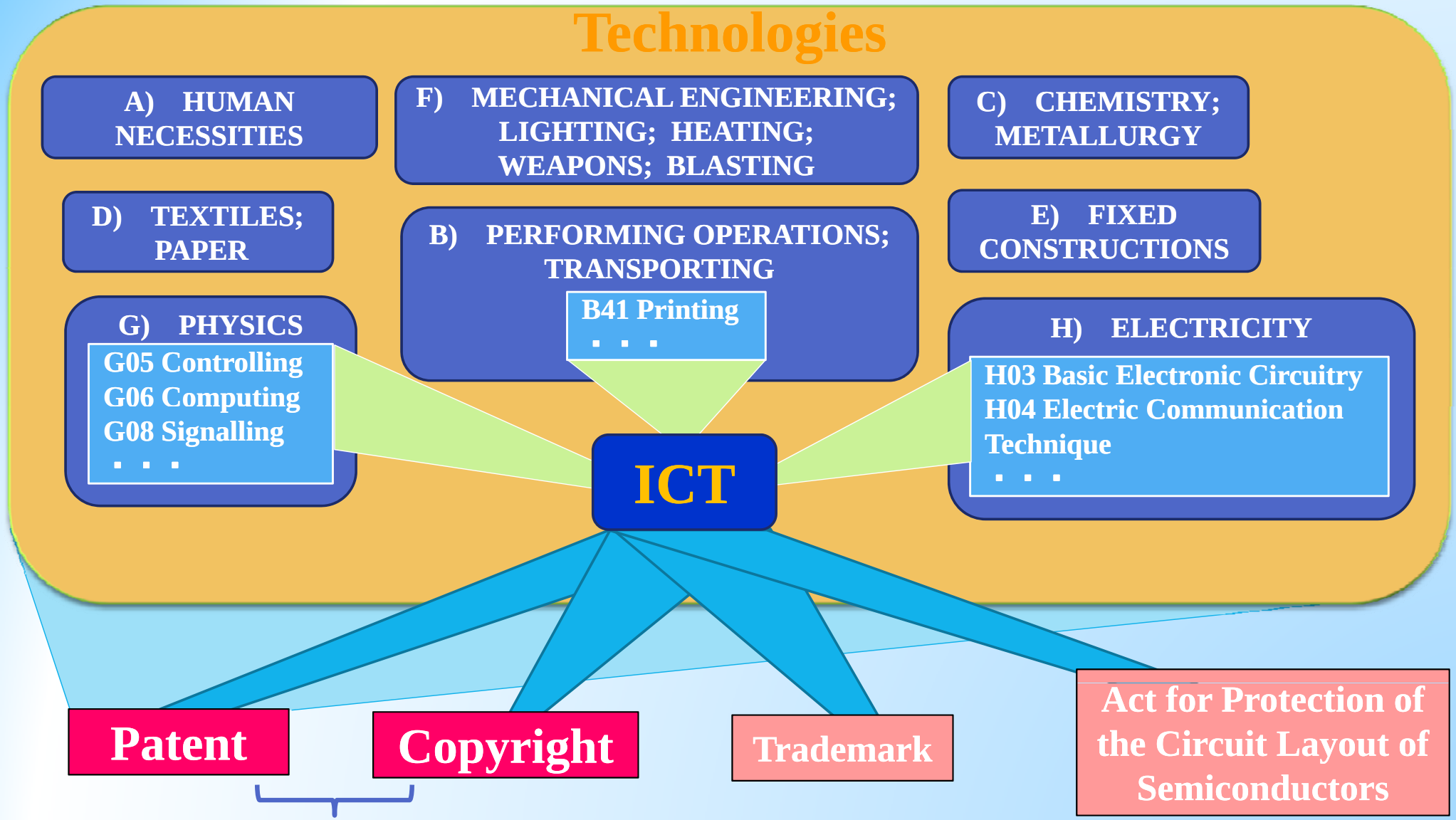


total 82,194

cf. National budget of 2015FY (96,342)

Current State of ICT Section 1 / 2014 WHITE PAPER Information and Communications in Japan
(http://www.soumu.go.jp/johotsusintokei/whitepaper/eng/WP2014/2014-index.html)

Types of intellectual property rights relating to ICT



A) – H) : Section titles of the International Patent Classification (IPC)

G05, etc. : Class titles of the IPC

2. ICT and Patent

What is “patent”？

Invention

Patent Law Article 2(1)

"Invention" in this Act means the highly advanced creation of technical ideas utilizing the laws of nature.

Laws of nature → A scientific law in the natural world

× A rule for playing a game
× A mathematical method
× A perpetual motion machine
× A natural rule itself

Technical ideas → A concrete means to achieve the purpose, and transfer is possible as knowledge

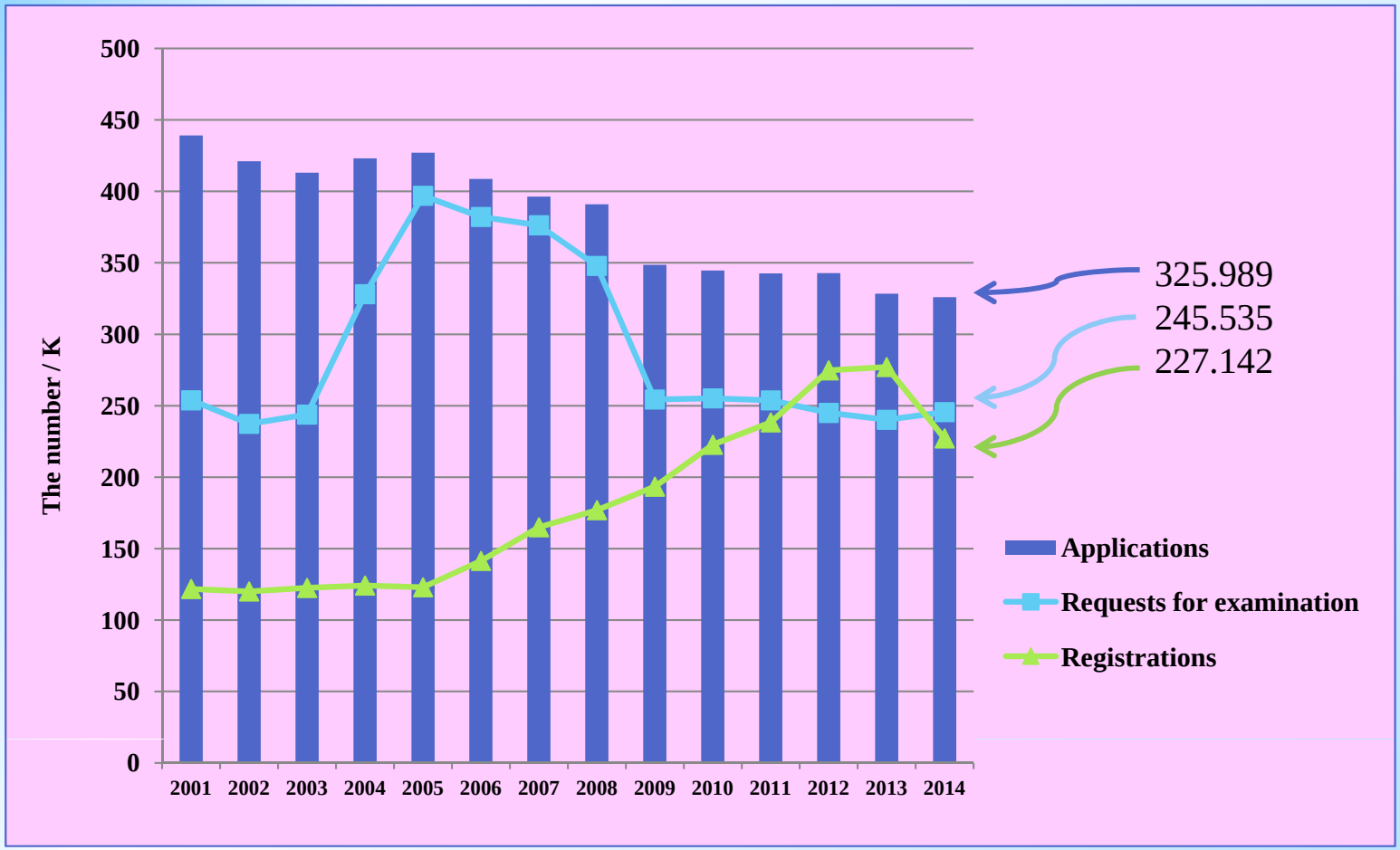
× Personal skill such as how to kick a football
× A manual of the mechanical operation method

Creation → Create a new thing, or the thing that is not self-evident

× Discoveries of natural things

The number of Patents

Application, Request for examination, Registration (Japan)



The number of patent applications remained unchanged at a high level, over 400,000, until 2006.

After the Lehman Brothers bankruptcy in 2008, the number of applications and requests for examination decreased.

The number of applications had remained around 340,000 since 2009, and it became lower in 2014; 325,989.

The Number of Applications and Registrations in 2014
(https://www.jpo.go.jp/torikumi_e/hiroba_e/2014syutsugan_kensuu_e.htm)

The number of Patents

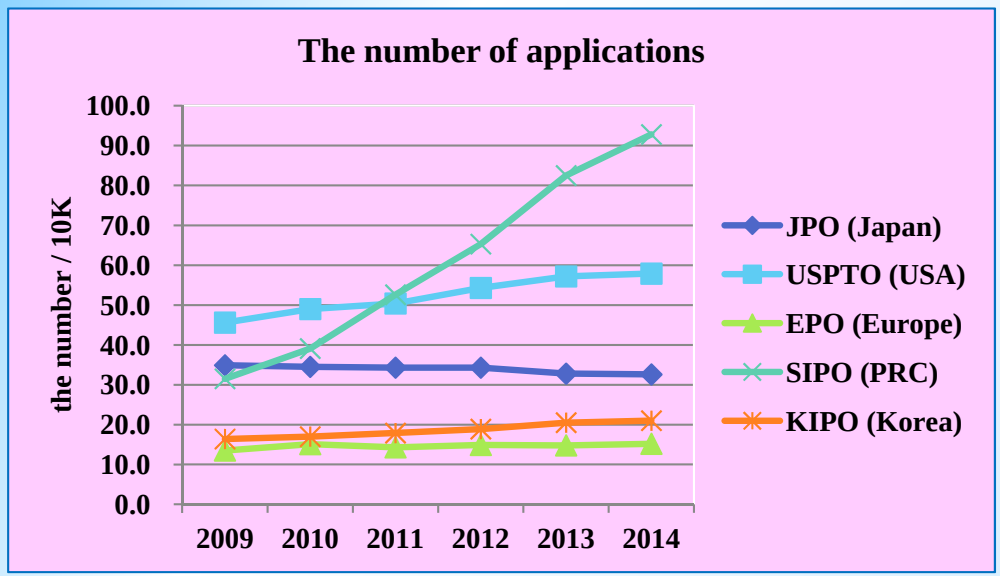
Top 10 Companies for Patent Registrations (2014)

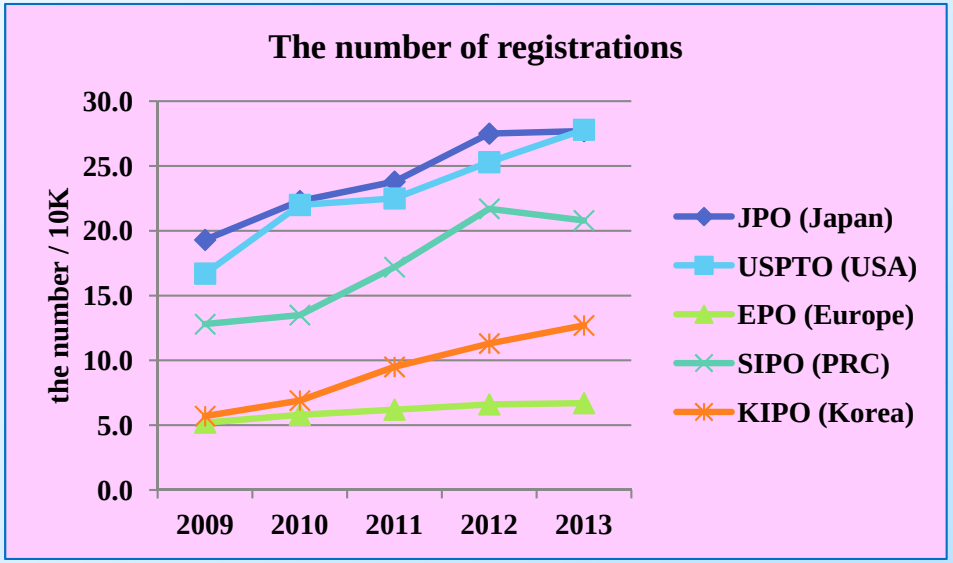
Rank	Applicant	Number of Registrations
1	Canon Inc.	4,597
2	Mitsubishi Electric Corporation	4,506
3	Panasonic Corporation	4,267
4	TOYOTA MOTOR CORPORATION	3,860
5	TOSHIBA CORPORATION	3,408
6	Ricoh Company, Ltd.	2,994
7	FUJITSU LIMITED	2,770
8	DENSO CORPORATION	2,714
9	FUJIFILM Corporation	2,576
10	Honda Motor Co., Ltd.	2,522

[JPO Status Report 2015] Part1 Trends of Intellectual Property with Facts and Figures
(http://www.jpo.go.jp/english/reference_room/statusreport/status2015_e.htm)

The number of Patents

Applications, Registrations (five major patent offices)





The growth of the number of applications in SIPO is remarkable.

The number of registrations in JPO and in USPTO are nearly equal in 2013.
Only in SIPO, the number of them decreased in 2013.

JPO : JAPAN [Japan Patent Office]
USPTO : USA [United States Patent and Trademark Office]
EPO : EUROPE [European Patent Office]
SIPO : PRC [State Intellectual Property Office of the P.R.C]
KIPO : KOREA [Korean Intellectual Property Office]

Japan Patent Office Annual Report 2015 (In Japanese)
(http://www.jpo.go.jp/shiryou/toushin/nenji/nenpou2015_index.htm)

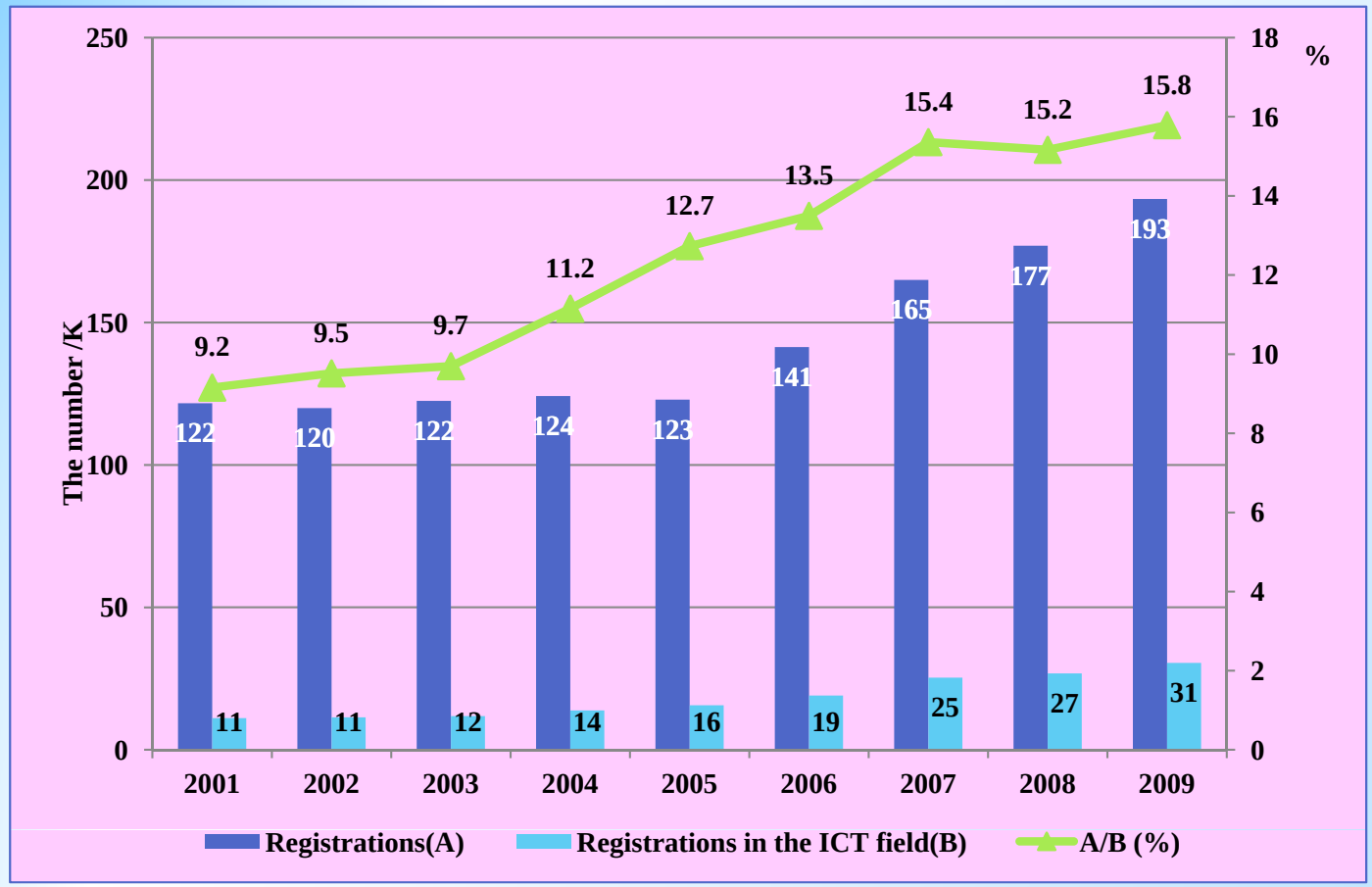
The number of Patents

Definition of Japan Patent Office

- High speed Network
- Security
- home electronics Network
- High speed Computing
- Simulation
- High-capacity / High speed memory
- Input / Output
- Recognition / meaning understanding
- Human Interface evaluation
- Software
- Device
- Information Communication / etc.

The number of Patents

Registrations of the ICT field and all fields patent



The ratio of the number of ICT patent registrations to the number of all the patent registrations is 9-16%, and was increasing recent years.

The number of registrations of ICT area were the largest among eight areas which JPO defines;

life science, environment, nanotechnology, energy, manufacturing Technology, social infrastructure, frontier.

Patent registration status of eight priority areas (JPO)
http://www.jpo.go.jp/cgi/link.cgi?url=/shiryou/toukei/1402-027.htm

Software patent

What is a software patent?

➡ The patent related to the software in computers

Definition of “program” in Patent Law

➡ a computer program and any other information that is to be processed by an electronic computer

Patent Law Article 2 (4)
A "computer program, etc." in this Act means a computer program (a set of instructions given to an electronic computer which are combined in order to produce a specific result, hereinafter the same shall apply in this paragraph) and any other information that is to be processed by an electronic computer equivalent to a computer program.

Software patent

The history of the software patent

In the past, the object of the patent was the invention utilizing the laws of nature

→ The software was an artificial process, and has not been considered as an invention.

After that the software industry increased, and the need of protecting the value of the software increased accordingly.

Patent ← Protect ideas of the software

Protect the representation of the program code → **Copyright**

Software patent

Handling history of software in the Patent Law (1/2)

Year	basis	outline	note
1975	examination guideline	If techniques are utilizing a law of nature, software invention can be patented as “ method” invention.	The program itself is unprotected because of the abstraction.
1993	examination guideline	“program itself” , “Recording medium of the program” are not invention, but software invention for the control of the device is to be a patent.	
1997	Operational guideline	Recording medium of the program is the invention of the “product".	

Software patent

Handling history of software in the Patent Law (2/2)

Year	basis	outline	note
2000	examination guideline	When information processing by software is realized by using hardware resources, the program is deemed to be “product”.	
2002	Patent Law	It’s clarified in the Law that the program is “product” and the service form which goes through a network deemed to be invention.	The examination guideline in 2000 is signed into Law in 2002

Business Model Patent

What is a business model patent?

The invention related to methods and mechanisms of business;

- Internet systems, or computer systems
- Methods and mechanisms themselves are novelty

Business Model Patent

The history of the business model patent in Japan

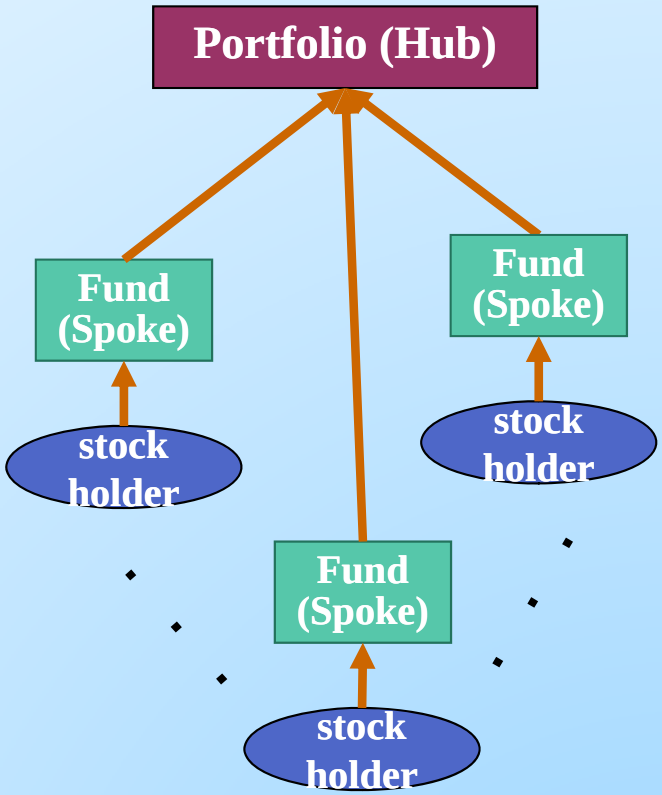
stage	moment	outline
dawn	1980s ~ around 1998	A computer technology developed in the 80s, and software became a target of the patent. (At that time, there was no keyword of “business model patent”.)
boom	around 1998 ~ around 2000	In the USA, a patent about the information system to carry out investment service was finally accepted as a result of court case. <State Street Bank v. Signature Financial Group; later discussion> From that time, the application about the business model patent became the boom in Japan as well.
matu-rity	around 2001 ~	Applications of the business model patent decreased from 2001, but the number of the request for examination did not show decrease bigger than it. This was because applications to take advantage of a boom decreased and changed into the application based on more absolute contents.

Business Model Patent

Appeal against Decision of Refusal Incident (1/2)

Invent summary

item	content		
Title of invent	The data processing system for a hub and spoke financial-service composition		
Publication No.	H06-505581		
Application Date	10 / 3 /1992	Priority Date	11/ 3/1991
Publication Date	23 / 6 /1994		
Applicant	Signature Financial Group		
Invent	Two or more investment funds (spoke) pool funds in a single portfolio (hub). And it distributes the asset which occurs every day according to the investment ratio of investment capital by managing this portfolio.		



Business Model Patent

Appeal against Decision of Refusal Incident (2/2)

Decision on appeal Date 23/ Aug. / 2004

Conclusion by JPO Appeal decision of refusal is performed → Finally refused by JPO

Reason

- Easily be invented by persons skilled in the art
- The descriptive matter and figure are deficient.

Reference: United States Court of Appeals for the Federal Circuit

Court and Date United States Court of Appeals for the Federal Circuit, July 23, 1998

Plaintiff and Defendant Plaintiff-Appellee; State Street Bank & Trust Co.
Defendant-Appellant; Signature Financial Group, Inc.

Conclusion by CAFC Reversed and Remanded

→ It is accepted that this invention by Signature was applicable to the invention of the patent law.

Judicial precedent related to the patent

Damages Case

Court and Date

Intellectual Property High Court, 25 / June / 2013

Plaintiff and Defendant

Appellant [Plaintiff]; Apple Inc.
Appellee [Defendant]; Samsung Japan Corp.

Fact summary

Apple demanded compensation for damages saying that an actions to import and to sell products of the Samsung was the indirect infringement of Patent Law.

Judicial precedent related to the patent

Damages Case

issue: related to technology

Does a method of Samsung belong to the technical range of the patent invention?

Point of issue

Is the "attribute information" processed by a media player (Samsung's product) same as the "media information" specified in the Apple's patent or not?

media information specified in the patent of Apple

- Title name
- Artist name
- Quality features

Bit-rate, Sample rate, Equalization, Setup, Volume setup, Start/Stop, Total time

attribute information processed by a media player which is Samsung's product

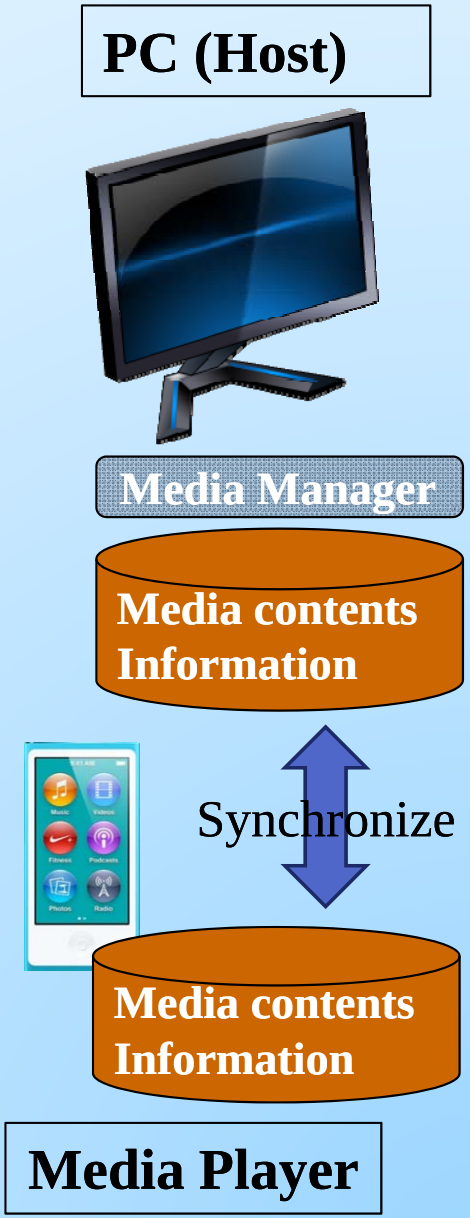
- File name
- File size

Judicial precedent related to the patent

Damages Case

Patent summary

item	content		
Title of invent	Intelligent synchronized operation for media players		
Patent Number	No. 4204977		
Application Date	17 / 10 /2002	Priority Date	22/10/2001
Registration Date	24 / 10 /2008		
Patentee	Apple Inc.		
Invent	- Method to synchronize the media contents of media player and the host. - The method which contains at least one of the quality features such as a bit-rate, a sample rate, equalization, a setup, a volume setup, and the total time		



Judicial precedent related to the patent

Damages Case

Judge of High Court

media information specified to patented invention

Attribute information included in a media player

Therefore, the realization method of appellee's products does not belong to the technical scope of the appellant's invention.

Remarks

(1) **Judgment Agree**; I am convinced to the result of the detailed comparison examination shown in the abstract of judgment.
(2) **However**, in the viewpoint of technical development, the essence of this invention is an idea which compares attribute information between the host and the media player, and takes a synchronization. The information in this case may be anything, and if it is a person skilled in the art, it is invented easily.

3. ICT and Copyright

What is “Copyright”？

Copyright

the legal right that someone has to control
the production and selling of
a book, play, film, photograph, piece of music, etc.
for a particular period of time
[Cambridge Business English Dictionary]

Definition of a work in Copyright Law

in other words “Information”

Copyright Act Article 2 (1)
(i) "work" means a production
in which **thoughts or sentiments** are expressed
in a creative way and which falls within the literary, scientific, artistic or musical domain;

Changes of Copyright Act revision

Area of Information Processing

year	item	note
1942	Digital computer birth	
1985	A computer program becomes a work	Becomes an object of Copyright Act
1986	A database becomes a work	
2006	Temporary duplicate permission of the program for maintenance, repair, etc. of a computer	

Background

(1) Late 60s, value of the computer software in industry became bigger.

(2) 70s, moods of the software protection increased.

- An industrial scale of the software spread and could not be ignored
- Examples of the copyright protection of the software increased abroad

Changes of Copyright Act revision

Area of Information Storage

year	item	note
1877	Record invention	
1920	The production of the record is prohibited without permission by an author	The first Copyright Act article about storage technology
1982	Compact Disk (CD) invention	
1984	Right of rental is given to authors, performers, producers of phonograms	
1992	Apply the compensation system for Private Sound and Visual Recordings to digital equipment	
1999	Regulations for the circumvention of technological protection measure	

Changes of Copyright Act revision

Area of Information Storage

Background

(1) It was 40 years from record invention until reflection to Copyright Act

⇨ Progress of technology was loose at that day, and the influence on business took long time.

(2) The revision frequency of the Copyright Act increased after invention of CD.

⇨ - Progress of technology was rapid then.
- As capacity increased, influence of the Copyright Act violation became big.

Changes of Copyright Act revision

Area of Information Telecommunication / Information distribution

year	item	note
1876	Telephone invention	
1920	Radio broadcast launch	
1931	It becomes a target of the copyright that an author broadcasts a work through a wireless telephone.	The first Copyright Article about the information-communication technology
1986	The cable broadcasting company is given neighboring rights.	
1997	It becomes a target of the copyright that an author transmits a work through the interactive transmission (= Internet).	

Background

(1) Information Storage ⇒ Copyright as "Time-shift"

(2) Information Telecommunication ⇒ Copyright as "Place-shift"

What is “Information”？

Feature of information

Feature 1 — **Value is relative and individual** → Values are depend on consciousness, requirement, the purpose and time by users.

Feature 2 — **Value of the processed information is increased** → Value of content increases by processing of correction or addition.

Feature 3 — **Replicable, Non-consumable** → Information can be replicated any times, and is not exhausted. Information can be used simultaneously at various places.

This feature greatly related to the copyright

What is “Information”？

Feature of “digital” information

Feature 4 **High quality even after a duplicate** → Even if information is copied or is transmitted, it is easy to maintain the same quality as original information.

These features greatly related to the copyright

Feature 5 **Ease of copy** → The copy and transmission of profusion of information are easy.

Media and Content

What is “ Content” , “ Media”, “ Digital Media”?

Content → information or experience provided to audience or end-users by publishers or media producers [Wikipedia]

Media → tools used to store and deliver information or data [Wikipedia]

Digital Media → electronic media used to store, transmit, and receive digitized information [Wikipedia]

Media and Content

Difference between Media and Content

Content

The idea or thought of an author

Work

Media

means of expression for
“idea or thought of an author”

Character,
Sound,
Picture,
Motion picture

Digital Media

store or transmit
[means of expression for
“the idea or thought of an author”]

CD,DVD

Internet,
Mobile

Content and Copyright

The problem of the copyright arising from the feature of information

Feature	Problem
No deterioration of quality : at the time of transmission / storage of information	The damage of the copyright infringement by an illegal transmission / copy is serious.

Content and Copyright

Provision

- Restriction of a copy
- Prohibition of access to contents

Copy control **Access control**

DRM (Digital Right Management)

- Technology of restricting and managing the usage of the contents expressed in digital
- To restrict the number of times of a copy and view time of contents, or to charge the contents according to the number of times of a copy or view time in order to protect copyrights.

4. Conclusion

Our agenda

The ICT will progress more and more in future

The importance of the intellectual property increases more and more,

It is often said that
"The law cannot follow progress of technology".

This is natural because the law handles matters that became mainstream in the world

Important!!

It is necessary that we should forecast the future of the ICT and predict enough the way of the law in advance.

FIN

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