For discussion – Japanese perspective

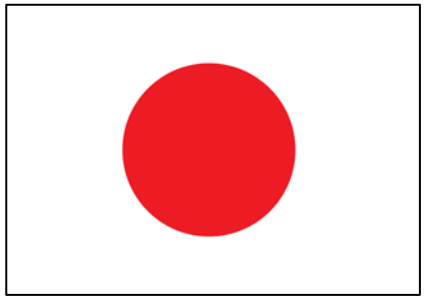
Dr. Shoichi Okuyama

Okuyama & Sasajima

January 2017

Naples Roundtable

Advanced Tips to Note for Japan



- Much ado about product-by-process claims
- Doctrine of equivalents revisited
- Revised Examination Guidelines
  - Separation into Examination Guidelines and Handbook
  - Improved grant rate before the JPO
- Computer software-related Inventions - patent eligibility in Japan

Much ado about product-by-process claims

- Supreme Court of Japan
  - rendered two decisions that have greatly modified product-by-process claim drafting and interpretation practice (Pravastatin Sodium Case decisions, June 5, 2015, the Second Petty Bench of the Supreme Court of Japan, Case Nos. 2012(ju)1204 and 2012(ju)2658).
  - Japan's highest court reversed the Grand Panel of the IP High Court.

- The two decisions upset the current practice and efforts toward international harmonization.

Two points noted in the decision

- Products made by a Different Process Infringe the Claim:
  - “[E]ven if a patent claim concerning a product invention recites the manufacturing process of a product, the technical scope of the patented invention should be determined to cover products that have the same structure and characteristics, etc., as those of the product made in accordance with the manufacturing process.”

- Product-by-Process Claims When Only Way to Define a Product:
  - “[W]hen patent claims concerning a product invention recite the manufacturing process of a product, such claims would satisfy the requirement [that] "the invention be clear" according to Article 36(6)(ii), Patent Act, only if circumstances exist under which it is impossible or utterly impractical to directly identify the structure or characteristics of the product at the time of filing.”

As a result -

- Examiners at the JPO now have to make sure, if they find a product-by-process limitation in a claim, that it was impossible or impractical to define the invention without using the product-by-process limitation
- Possibly with showing of external evidence or statements from applicants.

JPO published -

- March 30, 2016, a revised version of its Examination Handbook on March 30, 2016
  - Following -
    - July 6, 2015 - an interim announcement of July 6, 2015
    - September 16, November 25, 2015, and January 27, 2016 - Revisions of its Examination Guidelines and Handbook
  - This most recently revised version supersedes earlier statements and revisions

Two points are now clear

- First, process expressions such as "inserted," "hardened" or "coated" do not necessarily render a claim unclear
  - if the expression is considered to be merely another way to express the structure or characteristics of a claimed element

- Second, if the applicant can fairly argue in a response to an office action that it was very impractical and costly, as of the filing date, to measure and recite the structure of what is claimed, the claim may be allowable
  - Such as "an oxide semiconductor film formed on a substrate by spattering with a metal oxide target on the surface of the substrate at a temperature of x to y degrees Celsius"

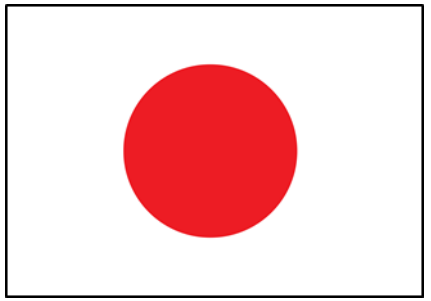
- An English translation of the revised Examination Handbook is available at:
- https://goo.gl/drmtJV or https://www.jpo.go.jp/tetuzuki_e/t_tokkyo_e/handbook_sinsa_e.htm

Situation is now contained

- The JPO has allowed the conversion of patented product-by-process claims to corresponding method-of-production claims through the trial for correction proceedings in several cases.
  - Although it is generally not allowed to change the category of patented claims
  - JPO applied Article 126(1)(iii) of the Patent Act, which allows clarification of unclear statements even after patent grant, and permitted category change from product into method.

- A JPO official has recently noted that while office actions containing product-by-process issues amounted to 15 % immediately after the Supreme Court decisions, now the figure has settled down to 2-3 %

Advanced Tips to Note for Japan



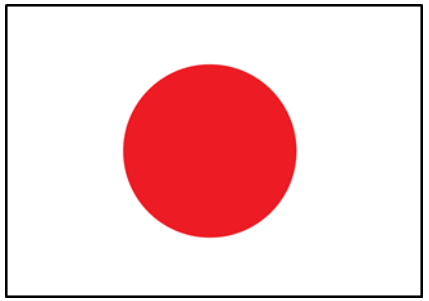
- Much ado about product-by-process claims
- Doctrine of Equivalents revisited
- Revised Examination Guidelines
  - Separation into Examination Guidelines and Handbook
  - Improved grant rate before the JPO
- Computer software-related Inventions - patent eligibility in Japan

DOE revisited by the IP High Court

- On March 25, 2016, the Intellectual Property High Court rendered a Grand Panel decision concerning the doctrine of equivalents
- The case relates to a drug patent that is directed to a manufacturing process (owned by Colombia U. and Chugai)
- The court found infringement under the DoE and granted injunctions against generic drug makers

- This case is important in two aspects. The IP High Court
  - signaled its positive view on the doctrine
  - expressed its opinion that a pioneering invention should enjoy a broader scope of protection under the doctrine

Advanced Tips to Note for Japan



- Much ado about product-by-process claims
- Doctrine of Equivalents revisited
- Revised Examination Guidelines
  - Separation into Examination Guidelines and Handbook
  - Improved grant rate before the JPO
- Computer software-related Inventions - patent eligibility in Japan

New Examination Guidelines and Examination Handbook in Sept. 2015

- After receiving public comments, the JPO published the entirely revised Examination Guidelines and a new Examination Handbook in September 2015
  - also available in English
  - No substantive changes in examination practice (according to the JPO)
  - Guidelines and Handbook are supposed to be more readable and have more examples
- Now we have “Examination Guidelines” for basic principles and “Handbook” for more specific examination practices
  - The JPO has had “Examination Guidelines” setting out general principles since 1993

Examination Guidelines and Handbook of 2015

Examination Guidelines (revised)

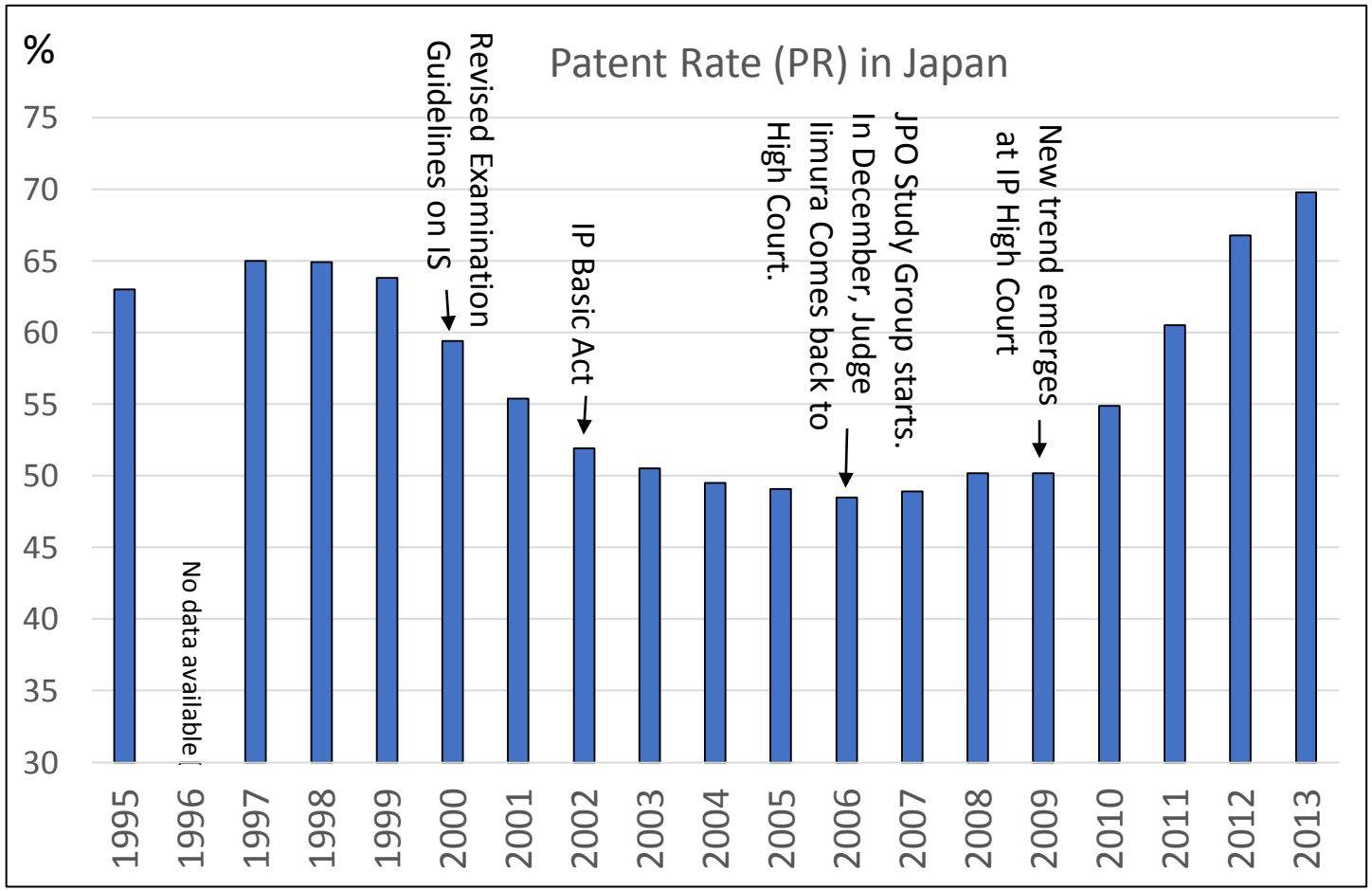
Part I Outline of Examination
Part II Description and Claims
Part III Patentability
Part IV Amendments
Part V Priority
Part VI Special Applications
Part VII Foreign Language Application
Part VIII International Patent Application
Part IX Extension of Patent Term
Part X Utility Model

Examination Handbook (new)

Parts I – X (Procedural matters and points to consider related to Examination Guidelines)
Part XI Affairs in General
Annex A Case examples
Annex B Special Criteria for Specific Technical Fields
Annex C Handbook for Preparing a Utility Model Technical Opinion
Annex D Court Decisions

Higher Patent Grant Rates in Japan in Recent Years

Year	%
1995	63
1996	NA
1997	65
1998	64.9
1999	63.8
2000	59.4
2001	55.4
2002	51.9
2003	50.5
2004	49.5
2005	49.1
2006	48.5
2007	48.9
2008	50.2
2009	50.2
2010	54.9
2011	60.5
2012	66.8
2013	69.8



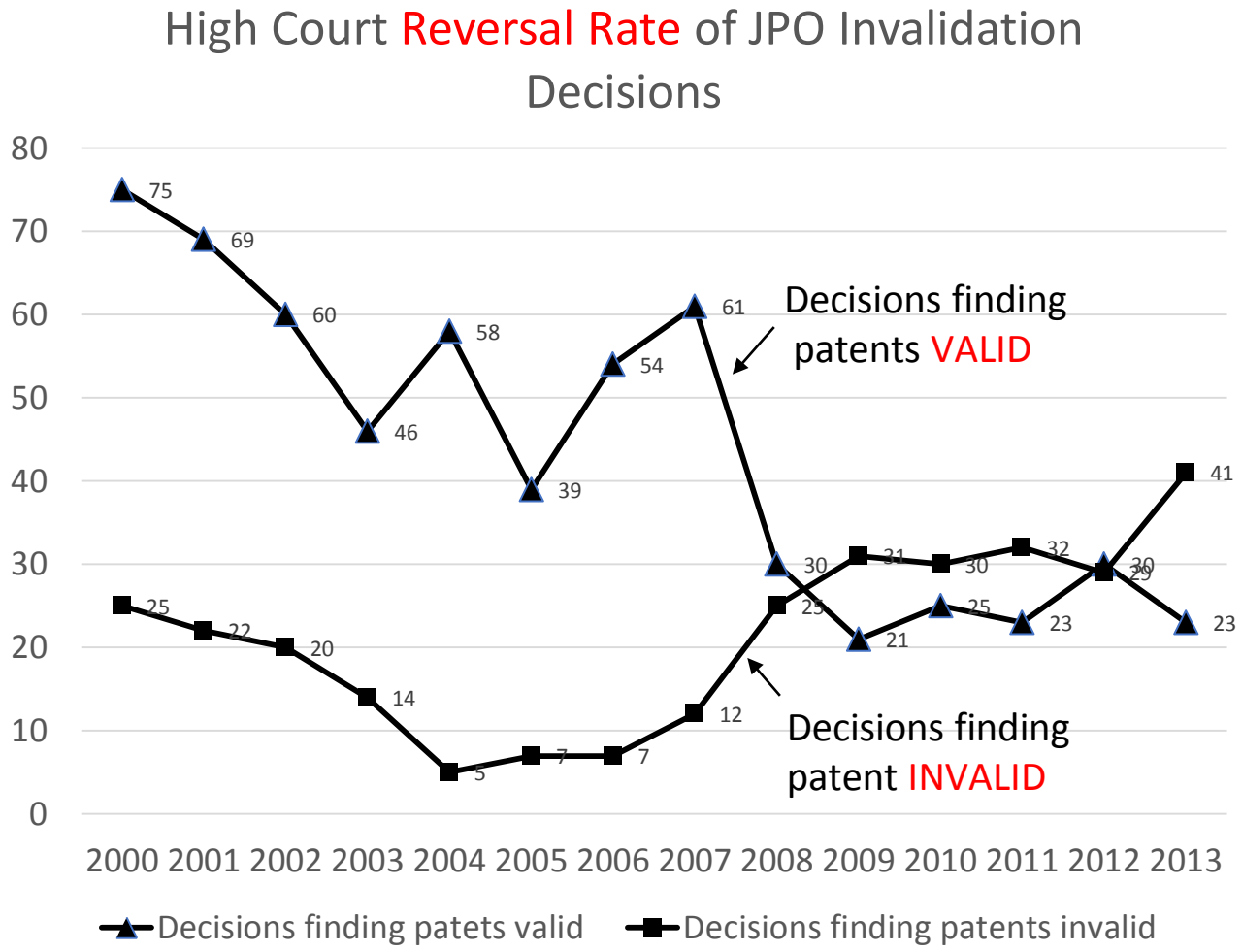
Major events:

- 1993, general Examination Guidelines (EG) published
- 2000, Revision of EG on IS
- 2002, IP Basic Act
- March 2003, "IP Strategy Headquarters" are set up.
- April 2005, IP High Court is established.
- 2006, JPO Study Group starts with appeal examiners, industry reps., and attorneys.
- January 2011, what may be called a landmark decision by Judge Iimura, similar to EPO practice.
- March 2012, Judge Iimura becomes head of IP High Court (retired June 2014).

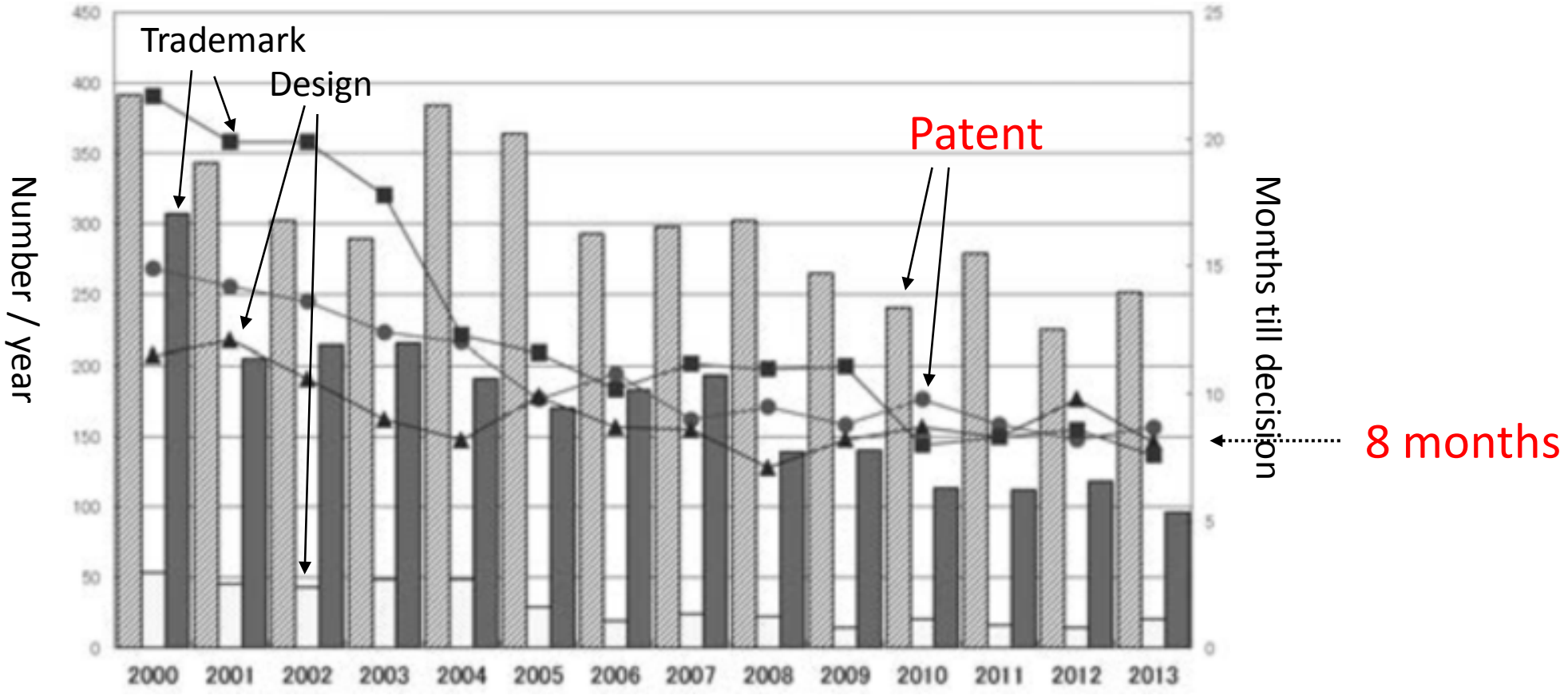
Prior to 2002: PR = Patents Granted / Total of Final Disposals

Since 2002: PR = Patents Granted / (Final Disposals + Post FA abandonments and withdrawals)

JPO Invalidation Decisions Reversed by High Court



Invalidation Trials end in 8 months average



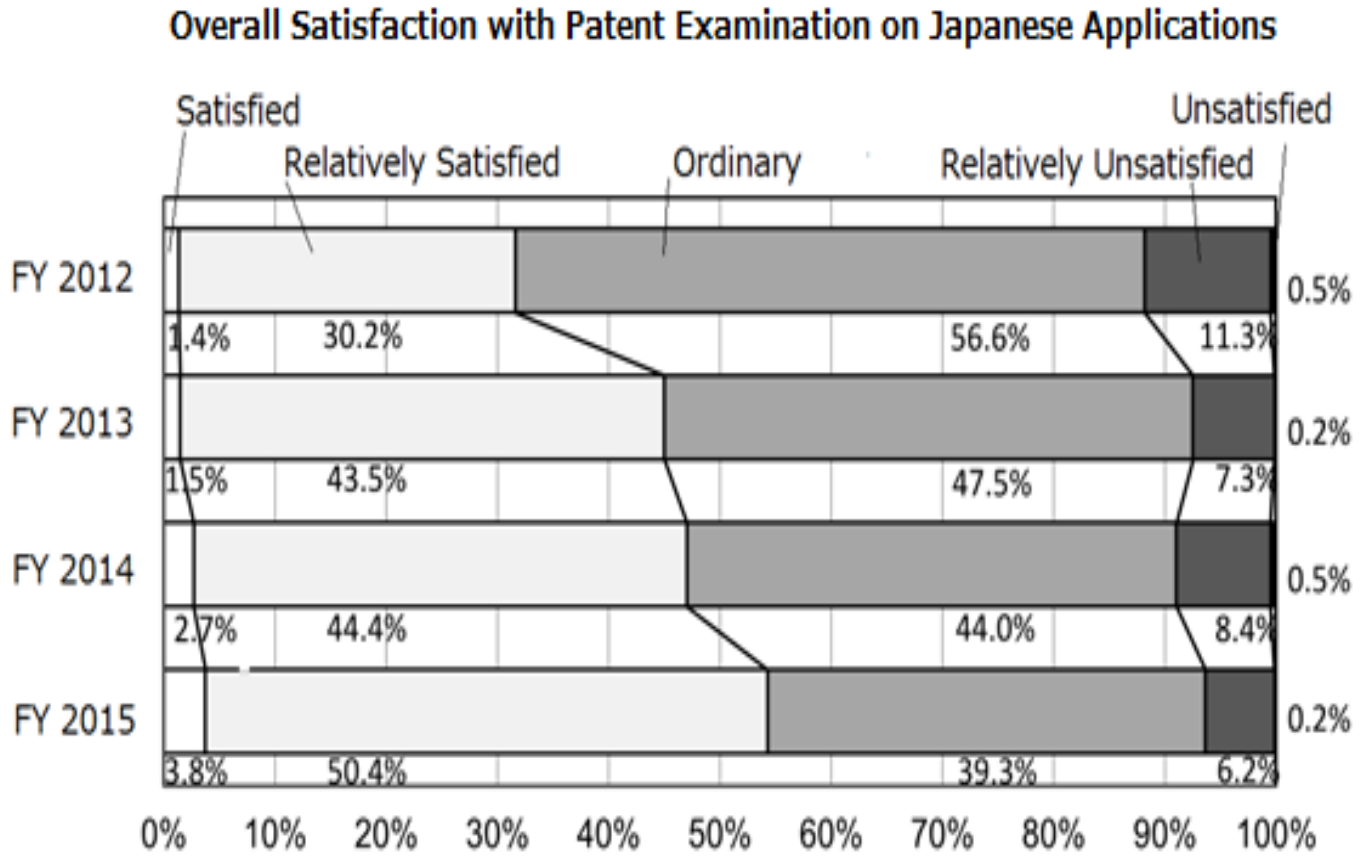
JPO Examination is much better for applicants

- Patent grant rate is considerably UP – much easier to obtain patents
  - Without substantive revision of Examination Guidelines on IS since 2000
- Invalidation becomes more difficult for alleged infringers

- Also…
  - June 2013, Examination Guidelines were revised for easier unity requirements
  - Sept. 2011, Examination Guidelines were revised for restricting the support requirement (or JP version of “written disclosure requirement”)
  - Fall 2015, Examination Guidelines were revised for their entirety for readability – no substantive changes were contemplated

Improved Satisfaction with JPO Examination

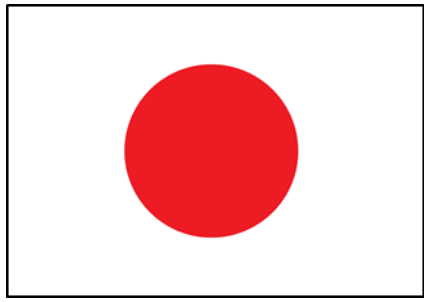
- June 2016, the JPO published its fourth annual survey of applicant and attorney satisfaction with patent examination.
- 684 applicants and attorneys, including 50 from overseas, were sent questionnaires, with more than 85% responding.



Advanced Tips to Note for Japan

- Much ado about product-by-process claims
- Doctrine of Equivalents revisited
- Revised Examination Guidelines
  - Separation into Examination Guidelines and Handbook
- Computer software-related Inventions - patent eligibility in Japan

Advanced Tips to Note for Japan



- Much ado about product-by-process claims
- Doctrine of Equivalents revisited
- Revised Examination Guidelines
  - Separation into Examination Guidelines and Handbook

- Computer software-related Inventions - patent eligibility in Japan

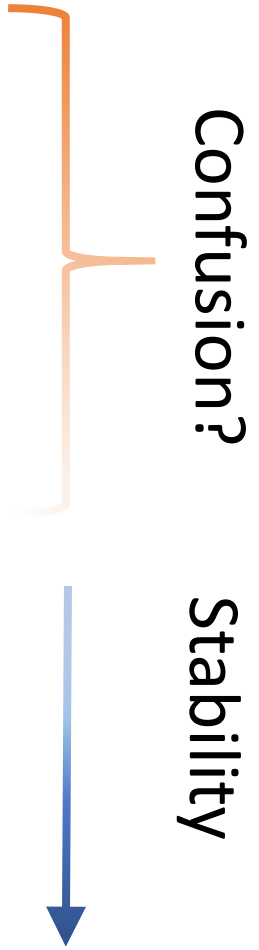
Important Points to Note - Summary

- Business methods *per se* are NOT patent eligible in Japan
- Computer implemented inventions and business methods that can be cast into computer software MAY be patent eligible
- Each software step has to be tied to hardware
  - Ordinary computer hardware is generally enough

- This practice have been in place for last ten years and more with stability

A bit of history

- Long-standing arguments how computer programs should be protected – by copyrights, by patents, or by a special statutory law??
- 1993 Examination Guidelines – first comprehensive guidelines
  - In preparation for the TRIPS agreement in 1994
  - A chapter on Computer Software Related Inventions
  - Prior to these, a number of field-specific guidelines were available
    - 1976 Computer-related inventions
    - 1982 Micro-computer related inventions
- 1997 Practice Guidance
- 2000 Revised guidelines on CS-related inventions
- 2015 The entire Examination Guidelines were revised, but substantially unchanged



Handbook Annex B: Examples of Application of "Examination Guidelines for Patent and Utility Model in Japan"

- Chapter 1: Computer Software-related Inventions (CS-related inventions)
- Chapter 2: Biological Inventions
- Chapter 3: Medicinal Inventions

- In each of the above chapters
  - enablement requirement;
  - support requirement (Chapter 3 only);
  - clarity requirement;
  - patent eligibility (Chapters 1 and 2 only);
  - industrial applicability (Chapters 2 and 3 only); and
  - novelty and inventive step

To Begin with – definition of “invention”

- Invention in this Act means a highly advanced creation of a technical idea utilizing a law of nature (Patent Act, Article 2(1))

- General requirements for ALL inventions including cs-related inventions
- Claimed invention as a whole

Allowable claim formats

- OK
  - Method
    - A game method, a method of predicting future sales, etc.
  - Apparatus, including a computer
  - System
  - Recording medium storing a computer program
  - Computer program (not computer program product)

- Unacceptable
  - Signal
  - Data
  - Computer program product (with exceptions)

General Criteria

A List of Non-statutory Subject Matters

- Examination Guidelines Part III, Chapter 1, 2.1

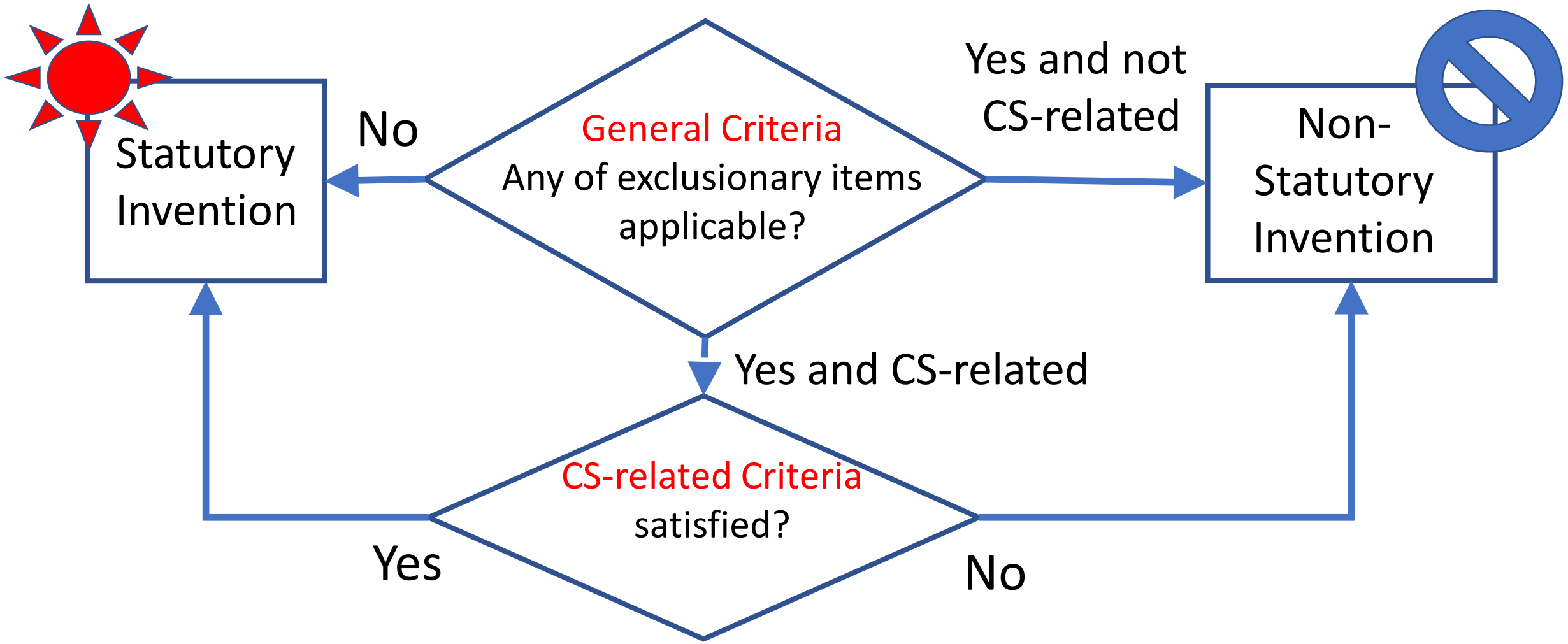
- A law of nature *per se*
- Mere discovery and not creation
- Contrary to a law of nature
- A law of nature is not utilized
  - Rules other than a law of nature (e.g. economic principle)
  - Man-made rules (games *per se*)
  - Mathematical algorithms
  - Mental activities of humans
  - Utilizing any of the above only (e.g. business method *per se*)
- Those not regarded as technical ideas
  - Mere presentation of information
  - (e.g. source codes of software *per se*)
- Clearly impossible to solve the problem to be solved by claimed means

CS-related Criteria - If any of the above is NOT applicable and if a claim is cs-related

- Whether the invention as claimed satisfies the two requirements below:
- [Hardware Requirement] A claimed invention is considered to be a statutory invention when the claim specifies information processing by software that is concretely realized by using hardware resources (e.g. CPU, memory).
- OR
- [Cooperation Requirement] Information processing by software is considered to be concretely realized by the hardware resources when the software and the hardware resources work cooperatively.

- JPO seems to consider the above two requirements as more or less equivalent
    - Nothing like “significantly more” or “machine or transformation” requirements
    - Nothing to do with “abstract idea”
    - But discussions on hardware and its cooperation with software steps are essential

Determination of statutory inventions



Statutory inventions

- A claimed method should be the creation of a technical idea utilizing a law of nature; that is,
  - computer software which enables a computer to perform such a method, or
  - a computer or system to perform such a method constitutes a statutory invention as a whole
- Examples:
  - An invention which controls an apparatus, such as a rice cooker, a washing machine, an engine, an HDD, a chemical reactor, or a nucleic-acid amplifier,
  - An invention which performs information processing based on characteristics of an object, which are either physical, chemical, biological, electrical, or else, such as the number of revolutions of an engine, a rolling temperature, a relationship between genome sequences and expressions of a character…

Ineligible Subject Matters - Examples

1. A method for calculating a product “s” of natural numbers “n” and “m” by the formula: $s=\{(m+n)^2-(m-n)^2\}/4$.

2. A program comprising:

```
int function_s (int m, int n){
return (pow(m+n, 2) – pow(m-n, 2)) / 4;
}
```

3. A computer for calculating a product “s” of natural numbers “n” and “m” by the formula: $s=\{(m+n)^2-(m-n)^2\}/4$.

4. A software for calculating a product “s” of natural numbers “n” and “m” by the formula: $s=\{(m+n)^2-(m-n)^2\}/4$.

Patent Eligible Example

A program that makes a computer execute a method for calculating a product “s” of natural numbers “n” and “m” by the formula: $s=\{(m+n)^2-(m-n)^2\}/4$, without using a multiplier or divider,
comprising;
a) reading data of natural numbers 'n' and 'm‘ from a memory,
b) calculating ‘n+m’ and ‘n-m’ by using an adder and a subtractor,
c) obtaining a value of ‘n+m’ square by referring to a look-up table containing values of ‘k^2’ indexed to ‘k’,
d) obtaining a square of ‘n-m’ square by referring to the look-up table, and
e) calculating ‘s’ by using the subtractor and a bit-shifter.

Reason: Hardware and software work cooperatively

Point Service Method

(Ineligible) 1. A service method for providing points according to an amount of purchase at a shop in an Internet space, comprising the steps of:

notifying a number of points to be given and a name of a receiver through the Internet,

retrieving an email address of the receiver stored in a memory based on a name of the receiver,

adding the number of points to points the receiver has as stored in the memory means, and

notifying that the points have been given through an email using the email address to the receiver.

(Eligible) 2. A service method for providing points according to an amount of purchase at a shop in an Internet space, comprising the steps of:

inputting into a server through the Internet a number of points to be given and a name of a receiver,

retrieving by the server an email address of the receiver stored in a memory based on a name of the receiver,

adding at the server the number of points to points the receiver has as stored in the memory, and

notifying from the server that the points have been given through an email using the email address to the receiver.

Parking Lot Management Method

(Ineliginle) 1. A method for managing a parking lot, comprising the steps of:
obtaining automobile identification data when an automobile enters the parking lot,
recording entrance data related to the entrance of the automobile in connection with the identification data, and
transmitting the entrance data to a mobile terminal a user has.

(Eligible) 2. A method for managing a parking lot, comprising the steps of:
obtaining by an automobile detector automobile identification data when an automobile enters the parking lot and transmitting the identification data to a management device,
generating at the management device entrance data related to the entrance of the automobile based on the received identification data, and recording the entrance data in connection with the identification data into an entrance data manager,
transmitting, with the management device to a settlement device, the entrance data, and
transmitting by the settlement device the entrance data to a mobile terminal a user has.

Method for Storing News Articles Delivered through Network

(Ineligible) 1. A method for storing news articles delivered through a network, comprising:
receiving by a receiver a news article delivered through a communication network,
displaying with a display the received news article,
providing by a user who has determined whether a certain keyword exists in the news article a storage instruction to new article storing means if the keyword exists, and
storing the news article into a memory by the news article storing means.
(Ineligible because a user is involved, and hardware and software steps are not cooperating)

(Eligible) 2. A method for storing news articles delivered through a network, comprising:
receiving by a receiver a news article delivered through a communication network,
displaying with a display the received news article,
determining by news article storing determination means which determines whether a certain keyword exists in the news article and providing a storage instruction to news article storing means if the keyword exists, and
storing the news article into a memory by the news article storing means.

Conclusion – in Japan

- A set of straightforward rules work, at least, for now

- Computer implemented inventions including, e.g., games and financial methods, and business methods that can be cast into computer software MAY be patent eligible
- Each software step has to be tied to hardware
  - Ordinary computer hardware is generally enough

Thank you

okuyama@quon-ip.jp