# Software Patents in Japan, in comparisons with US and EPO



Akihiro Ryuka Patent Attorney, Japan Attorney at Law, California, U.S.A.

July 22, 2024

This information is provided for general informational purposes only, and is not intended as legal advice. Because every case is unique, readers should not take any action, or refrain from acting based on this information without first consulting their own attorneys. The law is constantly developing, and this information may not be updated with each and every development. The mere presentation of this information does not create an attorney-client relationship with RYUKA IP Law Firm. RYUKA IP Law Firm specifically and wholly disclaims liability for this information.

# Index

- Method or article: Program per se?
- How to be saved from non-eligibility rejections
- JP Examination Guidelines
- US Examination Guidelines & Decisions
- EP Examination Guidelines & Decisions
- RYUKA Suggestions
- Means plus function & Step plus function
- Multiple dependencies



# Step 1: Method or Article? Program claims can be patented in JP & EPO

	JP, EP, TW, CN	US, KR
Program claims	YES(*)	NO
Memory or recording medium storing program	Acceptable	YES
Suggestion	Rewrite to YES	

<sup>\*</sup> Chinese Patent Examination Guidelines was updated in 2024 and allowed "Computer program product" claims. The change applies to all the pending applications including those filed before 2024.

∵ Selling program over the Internet: directly infringes program claims, but not memory claims. What about recording medium claims?

# Forms of Program Claims

### Japan Patent Examination Guideline ("JPEG")

•A program which causes a computer to carry out <u>procedures A</u>, B ...

(operate as means A, B ... / realize functions A, B ...)

### **EPO** Guideline for Examination ("EPGE")

•A computer program comprising instructions which, when executed by a computer, cause the computer to carry out

```
steps A, B, ...
```

(the method as claimed in claim 1.)

EPGE style is also acceptable in Japan.



# To support program claims in JP, EPO:

#### For JPO

Include at least standard descriptions such as below in the Priority base and PCT applications.

[0052] Software programs are provided via a network 2010, installed to flash memory 2040, and read out to RAM 2020 by CPU 2000. The software <u>programs</u> are then read by the CPU 2000 and <u>make the CPU 2000 execute all steps that are described in this specification with reference to Figs -- and --.</u>

#### For EPO

Write program claim-like descriptions in the "Summary of the Invention" or "General Disclosure" section.

# Step 2: Eligibility of Software Inventions

JP, KR	US	EP	
Utilizing law of nature?	<ul><li>Limited list of Abstract Idea</li><li>Math concept,</li><li>Method of organizing     human activity, or</li><li>Mental process?</li></ul>	Has technical features as well?	
$\Rightarrow$ If YES: $\bigcirc$ , If NO: $\times$ $\downarrow$ If Questionable	→ If No: Generally ○  ↓If YES	⇒ If NO: ×  ↓If YES	
Utilizing hardware resources?	Are additional elements integrated into a practical application?	Are the features that contribute to technical purpose	
Does software		inventive?	
cooperatively work with hardware?	Are something in the claim significantly more?		

# Japan

# × JPEG Example 1A

Appendix B Chap. 1-3 [Case 2-2]

A storing method of an article distributed via a network, comprising the steps of:

receiving the article distributed via the network;

displaying the article being received;

checking whether an intended keyword exists in texts of the article by users, and if it exists, giving "save" command to an article storing execution means; and

storing the article given the "save" command on an article storage means.

# JPEG Example 1B

A storing method of an article distributed via a network, comprising the steps of:

receiving the article distributed via the network;

displaying the article being received;

checking whether an intended keyword exists in texts of the article by article determination means, and if it exists, giving "save" command from the article determination means to an article storing means; and

storing the article on an article storage means, if the "save" command is given to the article storing means.



### × JPEG Example 2A

A service method for offering service points depending on an amount of commodity purchased at a shop on the Internet, comprising the steps of:

**notifying** via the Internet an amount of **service points** offered and a name of a person to whom the service points are offered;

adding the service points to an accumulated points of the person stored in the customer list storage means;

acquiring the e-mail address of the person from a customer list storage means based on the name of the person; and

notifying to the person that the service points have been given via e-mail using the e-mail address of the person.

# JPEG Example 2B

A service method for offering service points depending on an amount of commodity purchased at a shop on the Internet, comprising the steps of:

notifying a server of an amount of service points offered and a name of the person to whom the service points are offered via the Internet;

acquiring by said server, the e-mail address of the person from a customer list storage means based on the name of the person;

adding by said server, the service points to an accumulated points of the person stored in the customer list storage means; and

notifying by said server, to the person that the service points have been given, by e-mail using the e-mail address of the person.

# × JPEG Example 3A

A calculation apparatus to calculate the formula:

$$S = \{(m+n)^2 - (m-n)^2\} / 4$$

# comprising:

means for **inputting** natural numbers n and m, arithmetic means for calculating S, and means for **outputting** the S.



## JPEG Example 3B

A calculation apparatus to calculate the formula:

$$S = \{(m+n)^2 - (m-n)^2\} / 4$$

comprising:

means for inputting natural numbers n and m;

a table storing (k<sup>2</sup>) at the k-th position,

arithmetic means comprising of an adder-subtracter and a bit shifter,

means for outputting a result S by said arithmetic means, wherein the formula is calculated, without using a multiplier-divider, but using square values read by the said arithmetic means from the said square values table.



# Analysis of Examples in Japan

Claim relatively easily become eligible, by reciting what a computer does utilizing tables, databases, or temporary data stored in a storage or memory in Japan.



The inventive step is considered as a whole.



# US

### o: DDR Holdings LLC (Fed. Cir. 2014)

#### A system ... comprising:

- (a) a computer store containing data, for each of a plurality of first web pages, defining a plurality of visually perceptible elements, ...;
  - (i) wherein each of the first web pages belongs to one of a plurality of web page owners;
  - (ii) wherein each of the **first web pages displays** at least one active **link associated**with a commerce object associated with a buying opportunity of a selected one of a plurality of merchants; and ...
- (b) a computer server at the outsource provider, which ... is ... programmed to:
  - (i) receive from the web browser of a computer user a signal indicating activation of one of the links displayed by one of the first web pages;
  - (ii) automatically identify as the source page the one of the first web pages on which the link has been activated;
  - (iii) in response to identification of the source page, automatically retrieve the stored data corresponding to the source page; and
  - (iv) using the data retrieved, automatically **generate** and transmit to the web browser a **second** web page that displays: (A) information associated with the commerce object associated with the link that has been activated, and (B) the plurality of visually perceptible elements visually corresponding to the source page."

## o: Enfish v. Microsoft (Fed. Cir. 2016)

A data storage and retrieval system for a computer memory, comprising:

means for configuring said memory according to a logical table, said logical table including:

a plurality of logical rows, each said logical row including an object identification number (OID) to identify each said logical row, each said logical row corresponding to a record of information;

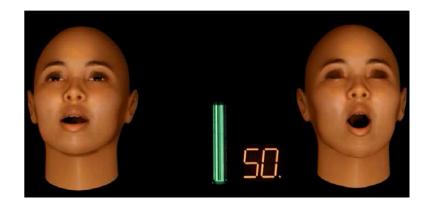
a plurality of logical columns intersecting said plurality of logical rows to define a plurality of logical cells, each said logical column including an OID to identify each said logical column; and

means for indexing data stored in said table.



# o: McRO v. Bandai Namco (Fed. Cir. 2016)







## o: McRO v. Bandai (Fed. Cir., 2016)

#### USP 6,307,576

- A method for automatically animating lip synchronization and facial expression of three-dimensional characters comprising:
- obtaining a first set of rules that define output morph weight set stream as a function of phoneme sequence and time of said phoneme sequence;
- obtaining a timed data file of phonemes having a plurality of sub-sequences;
- generating an intermediate stream of output morph weight sets and a plurality of transition parameters between two adjacent morph weight sets by evaluating said plurality of sub-sequences against said first set of rules;
- generating a final stream of output morph weight sets at a desired frame rate from said intermediate stream of output morph weight sets and said plurality of transition parameters; and
- applying said final stream of output morph weight sets to a sequence of animated characters to produce lip synchronization and facial expression control of said animated characters.

# o: Amdocs v. Openet (Fed. Cir. 2016)

A computer program product embodied on a computer readable storage medium for processing network accounting information comprising:

- •computer code for receiving from a first source a first network accounting record;
- •computer code for correlating the first network accounting record with accounting information available from a second source; and
- •computer code for using the accounting information with which the first network accounting record is correlated to enhance the first network accounting record.



# ○: *Bascom v. AT&T* (Fed Cir. 2016)

#### USP 5,987,606

A content filtering system for filtering content retrieved from an Internet computer network by individual controlled access network accounts, said filtering system comprising:

- a local client computer generating network access requests for said individual controlled access network accounts;
- at least one filtering scheme;
- a plurality of sets of logical filtering elements; and
- network, said ISP server associating each said network account to at least one filtering scheme and at least one set of filtering elements, said ISP server further receiving said network access requests from said client computer and executing said associated filtering scheme utilizing said associated set of logical filtering elements.



# o: Trading Tech. v. CQG (Fed. Cir. 2017)

USP 6,766,304

SYCOM FGBL DEC99				Ē		1	
E/W	10:48:44		BidQ	AskQ	Prc	LTQ	
	ᄔ	3		104	99		
	R	5		24	98		
	7:	20		33	97		
	X	10		115	96		
	,	0			-		
	10	1H		32	95		
	50	3H		27	94		
S 10 W 14	1K	5H		63	93	10	≻1101
	С	LR	43		92		1101
	×	10	125		91		
	17	▽	97		90		
B 0 W 15	С	XL	18		89		
B 0 W 13	+	<u> </u>	97		88		
	NE	ET 0	30		87		
B 0 W 17	NET REAL		43		86		
			110		85		
			23		84		
			31		83		
			125		82		
			21		81		



### o: Trading Tech. v. CQG (Fed. Cir. 2017)

#### USP 6,766,304

1. A method for displaying market information relating to and facilitating trading ... comprising:

dynamically displaying a first indicator in one of a plurality of locations in a bid display region, each location in the bid display region corresponding to a price level along a common static price axis, the first indicator representing quantity associated with at least one order to buy the commodity at the highest bid price currently available in the market;

dynamically displaying a second indicator in one of a plurality of locations in an ask display region, each location in the ask display region corresponding to a price level along the common static price axis, the second indicator representing quantity associated with at least one order to sell the commodity at the lowest ask price currently available in the market;

. . .

displaying an order entry region comprising a plurality of locations for receiving commands to send trade orders, each location corresponding to a price level along the common static price axis; and

in response to a selection of a particular location of the order entry region by a single action of a user input device, setting a plurality of parameters for a trade order relating to the commodity and sending the trade order to the electronic exchange.

#### o: Thales Visionix v. US (Fed. Cir. 2017)

A method comprising determining an orientation of an object relative to a moving reference frame

based on signals from two inertial sensors mounted respectively on the object and on the moving reference frame.



### o: Visual Memory v. NVIDIA (Fed. Cir. 2017)

USP 5,953,740

A computer memory system connectable to a processor and having one or more programmable operational characteristics, said characteristics being defined through configuration by said computer based on the type of said processor, wherein said system is connectable to said processor by a bus, said system comprising:

- a main memory connected to said bus; and
- a cache connected to said bus;
- wherein a programmable operational characteristic of said system determines a type of data stored by said cache.



## o: Finjan V. Blue Coat (Fed. Cir. 2018)

A method comprising:

receiving by an inspector a Downloadable;

generating by the inspector a first Downloadable security profile that identifies suspicious code in the received Downloadable; and

linking by the inspector the first Downloadable security profile to the Downloadable before a web server makes the Downloadable available to web clients.



## o: Core Wireless (Fed. Cir. 2018)

USP 8,713,476

A computing device comprising a display screen, the computing device being configured to display on the screen a menu listing one or more applications, and additionally being configured to display on the screen an application summary that can be reached directly from the menu,

wherein the application summary displays a limited list of data offered within the one or more applications,

each of the data in the list being selectable to launch the respective application and enable the selected data to be seen within the respective application, and wherein

the application summary is displayed while the one or more applications are in an un-launched state.



# **EPO**

# **EPO** Presentation of Information

- × Mere presentation such as books/manuals
  - -- Same as Japan (JPEG App. B EPC Art. 52(2)(d))
- O Presentation method/means having technical character
  - -- Same as Japan (JPEG App. B EPGE G3.7)
    - TV Test chart having technical character (JPEG App. B)

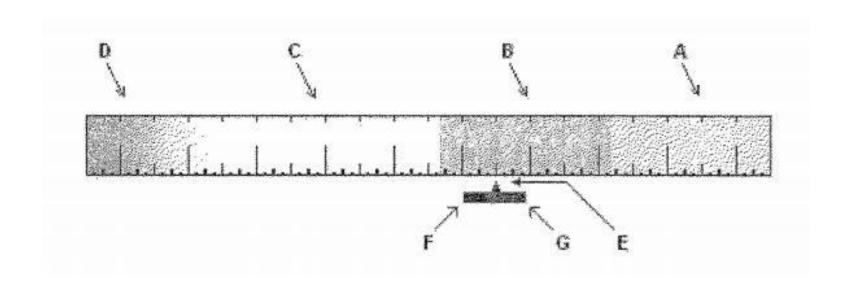
Rules are same, but application of rule is stricter in EPO.

<Examples will be reviewed later>



# **EPO** is strict for presentation of Information

**×: EP1874193: Method for showing ruler in microscope** 





# **EPO** is strict for presentation of Information

#### **\*:** EP1874193 (Auxiliary request to the Board of Appeals)

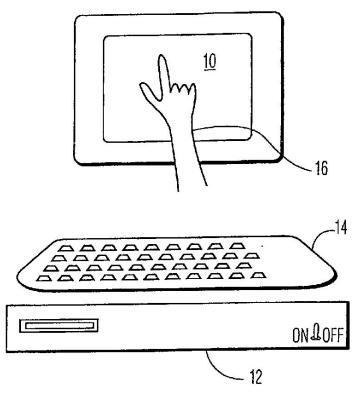
A process operatively coupled to a microscope device, the device configured to calculate values for variables wherein the variables comprise ... median and/or mean and standard deviation for corneal cellular density; ... comprising:

- generating using the device a statistical-analytic ruler graphic for a variable wherein the ruler graphic comprises areas A, B, C and D wherein area A indicates values of the variable above that expected for age of a corneal cell sample, area B indicates ...;
- generating an arrow graphic E that indicates mean of the variable for the corneal cell sample;
- generating a segment graphic F-G wherein an F end of the segment indicates an inferior limit of a reliability interval for the variable, wherein a G end of the segment indicates a superior limit of the reliability interval for the variable, and wherein the segment length from F to G represents a reliability interval calculated according to a mean plus and minus a relative error calculated for the corneal cell sample; and
- generating a report graphic that comprises at least the ruler graphic for the variable.



# EPO is strict for presentation of Information, but allows with technical PC operation

T0077/14: Philips GUI for controlling scroll





# EPO is strict for presentation of Information, but allows with technical PC operation

- 8. A method of controlling a scroll-like display ... comprising the steps of: sensing the duration of finger touch contact time ...;
- sensing the speed and direction of motion of said finger touch contact ...;
- if the sensed duration of finger touch contact time is greater than a first preset minimum time and less than a second preset minimum time and is accompanied by motion along the surface of the display screen, moving said display ..., and
- following separation of said finger touch from said display screen, initiating scrolling motion ... in said sensed direction and at said sensed speed; ...;
- slowing the speed of said scrolling motion ... at a predetermined rate; and
- terminating said scrolling motion upon first occurrence of ... a substantially stationary finger touch having a finite duration... (or) an end-of-scroll signal...,
- ..., if after subsequent moving of said display ... there is ... finger contact ..., maintaining said display screen in the position ..., and reverting the system to "waiting" status, (and)
- ... selecting an item touched if the sensed stationary duration of the finger touch contact time is less than said second preset minimum time and if no motion occurs ... wherein upon selection the selected item is highlighted. (\*Edited for easier reading)

### **Practical Differences**

Stricter  $\leftarrow$  EPO — US — JPO  $\rightarrow$  Less Strict



# Suggestions for being saved

	<b>General Suggestions</b>	RYUKA Suggestions
JP KR	Write cooperative relationships with hardware in claims.	Write problems that exist in technical fields (PC, Internet, other hardware), but not in abstract fields (economics,
US	Make clear the <b>practical application</b> realized by additional elements	psychologies, human activities)  Explain:
EPO CN	Make clear how claimed elements contribute solving technical problems.	1) how the claimed features help solve them for US eligibility and JP, EP inventive steps, and 2) cooperative relationships with hardware for JP, US, EP eligibilities

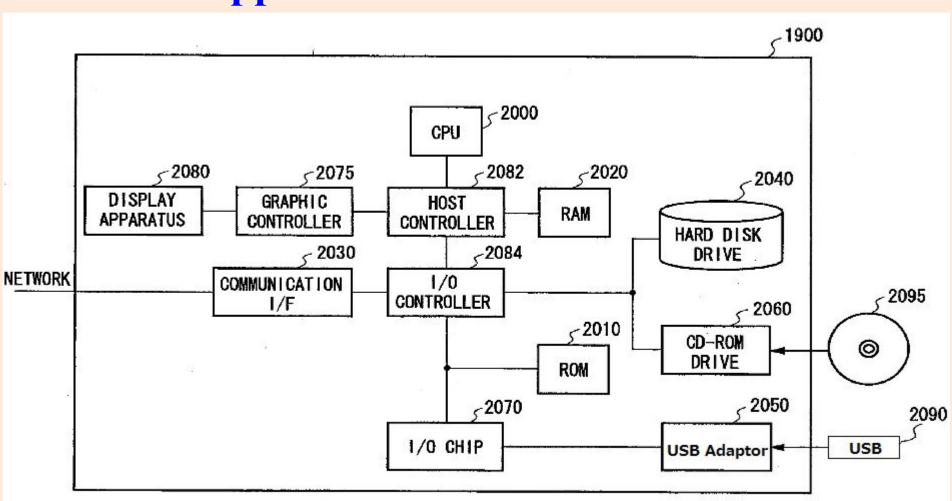


# Drafting priority or PCT applications ready for future amendment

- 1. <u>Describe</u> hardware such as <u>storages and</u> memories, even if the hardware is a typical PC or cell phone.
- 2. Describe <u>how software uses tables, databases</u> or temporary data.
- 3. Describe that the tables, databases, etc. are stored in a storage or memory.



# Add a computer block diagram to priority base and PCT applications



# Describing cooperative relationships with hardware in Priority and PCT applications

A simple description like below still helps amendments in JP and US in some degree. (although not ideal).

[0050] Tables --- and --- , and data/information --- and --- described in the embodiments can be read from hard disk drive 2040 and temporarily stored in RAM 2020 by CPU 2000. CPU 2000 may then read tables ----, and --- and data/information --- and --- from RAM 2020, process them, and store them to RAM 2020 again.



# Means + function & Step + function

	JP, KR, EP	US, CN
Scope of Protection	Anything capable of realizing the function.  (Although unclear words are construed in reference to the specification and often limited in Japan)	Limited to the embodiments disclosed in the specification and their equivalents only.  Williamson v. Citrix Online, LLC, 792 F.3d 1339 (Fed. Cir. 2015)(en banc)
Suggestion	Draft functional claims	Add structural claims that recite structural features.



# Multiple Dependencies of the claims

	JP, EP, CA, AU, NZ	CN, KR	US
Multi-dependent claims from other multi-dependent claims	<ul> <li>Wider scope</li> <li>More possibilities         <ul> <li>to have dependent</li> <li>claims examined</li> </ul> </li> <li>Better for future ar</li> </ul>	Not allowed, but still examined	×
Multi-dependent claims from single dependent claims	Counted as one claim for claim fees		X High claim fee, yet easier to invalidate



# **Suggestions: Claim Dependencies in PCT Applications**

- To be filed in JP, EP, CN, KR, CA, AU, or NZ
  - ☐ Multiple layers of multiple dependencies
- •NOT in the above, but in TW
  - ☐ Single layer of multiple dependencies
- -Easier to reduce than to add dependencies later
- -Later adding dependencies may introduce a new matter in EPO and not allowed after OA in CN.
- -US claims can be changed at the entry by continuation (bypass) application from the PCT.



# Thank you

#### about us:

Celebrated 20<sup>th</sup> year in 2018. 42 attorneys, 120 in total

#### They say:

Rising Star in Japan IP, ILASA
Top 5 Japan Patent Firm, Asia IP
Top 10 Japan Trademark Firm, Asia IP
Top 20 Japan Patent Firm, MIP
Top 20 Japan Trademark Firm, MIP

We commit to proactive communication, which leads to deeper understanding of our clients and creative processes.



