Specific Types of Claims

National Patent Drafting Course

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Importance of having different categories

- Product and method
  - What distinguishes a method from a product?

- Think about infringement
  - A product claim can be infringed when …
  - A simple method claim can only be infringed when …
  - A claim directed to a process of making a product can be infringed when …

- In order to obtain a full protection, it is important …
  - To include different categories of claims in one application
Very artificial distinction

- Distinction between method and product claims is artificial.
  - The inventor has nothing to do with it.
  - Inventions occur without any regard to this distinction!

- It is important for a patent attorney to find the best claiming strategy for a given invention.
Typical product claim

A typical product claim lists **elements** and has **tying features**

1. An apparatus for supporting a camera, comprising:
   a pivotal mounting configured to hold the camera, and
   a plurality of legs arranged to support the pivotal mounting.
Typical method or process claim

A list of steps – …ing steps – simple.

1. A process for producing fried rice, comprising the steps of:
   turning the heat source on;
   cooking rice in water over the heat source for a predetermined period;
   placing a predetermined amount of oil in a pan;
   cooking other ingredients and seasoning in the pan over the heat source;
   placing the cooked rice in the pan; and
   stirring consistently the rice and the other ingredients for a predetermined length of time over the heat source.
Use different words between product and method claims, and don’t mix

- Product claims are made up of physical elements and features.
  - Apparatus, device, machine, system or even computer program characterize product claims.
  - “means” is for product claims only (provably).

- Method claims are made up of …ing steps.

- Product and method claims MUST be clearly distinguished.
  - Do not include method steps (…ing steps) in a product claim.
  - Do not characterize a method claim as a system.
Product claims (apparatus or device)

- Specify structure
  - The basic rule
- May use functional language
  - Instead of “a screw and a nut”, you may say “restraining means” or “means for restraining”
  - Look very broad and may be broad

- Potential problems?
  - Yes. US Patent Law Section 112(f)
  - Other jurisdictions?
Examples – product claims

1. An apparatus for supporting a camera, comprising:
   a pivotal mounting configured to hold the camera, and
   a plurality of legs arranged to support the pivotal mounting.

Functional...

1. An apparatus for supporting a camera, comprising:
   first means for pivotally holding the camera, and
   second means for supporting the first means.
Product claims (compound or composition)

1. A compound of formula 1 shown below:
   (chemical formula)
   wherein X may be H, Br or I and Y may be a methyl or ethyl group.

1. A composition for beverage, comprising:
   water;
   an artificial sugar substitute;
   a peach flavoring; and
   xanthan gum.
An example of composition claim

1. A copper electroplating solution, comprising:
   - an alkaline solution of copper sulfate at a concentration of 30-50 g per liter;
   - sulfuric acid at a concentration of 2-4 times that of the copper acetate solution;
   - an aqueous solution of a pH-modifying substrate in an amount sufficient to adjust the pH to a value of 3.5 to 5.0.

Is this claim clear?
Probably yes.
Markush group in product claim

- Markush group

- “X is one element selected from the group consisting of H, Br and I”
  - “consisting of” is a closed language.
  - The group is limited to H, Br, and I. No other elements included.

- Less limitative

- A pharmaceutical composition consisting essentially of active substances A, B and C.
Use claim

- Use claims are generally considered as method claims.

- Typical use claim
  1. Use of substance X as an insecticide.

  This is equivalent (?) to:
  1. A method of killing insects by using substance X.

What about ?
  1. An insecticide comprising substance X.
Use of use claim

When compound A is new, claim –
1. Compound A having a chemical formula shown below:
   (chemical formula).

When compound A is not new, but use as a drug is new:
1. Use of compound A in manufacturing a drug for prostate cancer. (so-called Swiss-type claim)

Nowadays -
1. A pharmaceutical composition for curing prostate cancer, comprising compound A 
or its pharmaceutically acceptable salt.
1. A method of treating a prostate cancer patient with compound A. (only in the U.S.)
First and second medical uses

- When compound A has been known, you invent the use of it for treating prostate cancer.
  - Claim it as –
  - “A drug comprising compound A.” or
  - “A drug for treating prostate cancer, comprising compound A.” or
  - both

- When compound A has been known for treating prostate cancer, you invent the use of it for treating leukemia.
  - Claim it as “A drug for treating leukemia, comprising compound A.”
Method of treatment claims

- Before EPO, methods of treatment on humans and animals are now allowed.
- In Japan, methods of treatment on humans are not allowed. Non-human animals are OK.
- In the U.S., methods of treatment are allowable.
- Other jurisdictions…

- Products are generally OK.
## Patentable Subject Matters in Medical Fields (US, EP, JP Comparison)

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<td>Biological products (e.g. cultured skin)</td>
<td>Kits</td>
</tr>
<tr>
<td>Delivery methods</td>
<td>Administration of drugs</td>
<td>Blood pressure</td>
<td>NMR, X-ray, etc.</td>
<td></td>
</tr>
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</table>

In Japan, medical treatment and diagnostic methods are not patentable for humans only. Methods on non-human animals are patentable.
Product-by-process claims

- For antibiotics, metals, alloys, and semiconductors …
- Certain products can only be defined by manufacturing processes or method steps.
- An antibiotic obtained by growing a certain mold on culture media and purifying an extract.
- A metal product produced by annealing a specific alloy from temperatures X to Y at a rate of Z degrees per second.
- A semiconductor device produced by spattering atoms X onto a silicon substrate at a rate of Y and covering it with an insulating layer.
Issues with product-by-process claims

- Whether a product-by-process claim cover products made by a process other than the one recited in the claim?
  - Most patent offices would say “yes” for the purpose of examination.

- For this format to be allowed, does it have to be the only way to define the invention?
  - Maybe yes, but varies among different jurisdictions.

- Obtained, obtainable or directly obtained?
Computer implemented inventions

- Very confusing and different in one jurisdiction to another.
- Business methods *per se* are generally not patentable, probably.
- Software steps tied to hardware may be patentable in some jurisdictions.
  - How you claim them is another question.
- The U.S. is most problematic for now.
Claiming computer-implemented inventions

- A computer-readable storage media containing …
- A computer program product …
- A computer program …
  - A computer program for carrying out the steps of …ing …

- A signal produced by encoding data by the steps of … (say, under the MPEG specification).
  - Europe only?
Examples

1. A computer-readable storage medium storing instructions that, when executed by a computer, cause the computer to perform a method for using a computer system to perform financial transactions, the method comprising the steps of: …

Data structure …

1. A memory for storing data for access by an application program being executed on a data processing system, comprising a data structure stored in the memory including information resident in a database used by the application program and including:
   a first data object configured to …,
   a second data object configured to …, and
   a third data object configured to …. 
Biotechnology claims

- Microorganism, cDNA, recombinant DNA, DNA fragments, protein, monoclonal antibodies, anti-sense DNA and RNA, recombinant vectors and expression vectors …

- Deposit of biological materials is possible.
  - A list of depository organizations
    - Microorganisms, seeds, cells, etc. can be deposited.
Typical bio claims

1. An isolated polynucleotide comprising a member selected from the group consisting of:
   (a) a polynucleotide encoding a polypeptide comprising amino acids 1 to 255 in SEQ ID NO: 2; and
   (b) a polynucleotide which hybridizes to and which is at least 95% complementary to the polynucleotide of (a).
2. The polynucleotide of claim 1, comprising nucleotides 1 to 1080 of SEQ ID NO: 1.

1. A seed of cotton cultivar designated PHY 78 Aacla, wherein a representative sample of seed of said cultivar is deposited under ATCC Accession No. PTA-5666.
Omnibus claims

- An apparatus for harvesting corn as described in the description.
- A juice machine as shown in Fig. 4.
- Acceptable in Australia and New Zealand, but elsewhere?
What distinguishes method claims from product claims?

- Element of time

Are “use claims” allowable in many jurisdictions?

- Provably yes.

Are “use claims” useful?

- Provably not any more.
Quizzes 2

What’s wrong?

1. An apparatus for harvesting corn, comprising:
   - a thrasher for cutting corn;
   - moving the cut corn into a hopper; and
   - rotating pivot means attached to the thrasher.