Specific Types of Claims

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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.
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.
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; and
   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)

<table>
<thead>
<tr>
<th>Surgical Methods</th>
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<th>Diagnostic Methods</th>
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<tr>
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<td>Method for making medical devices</td>
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<tr>
<td>Others</td>
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<td>NMR</td>
<td>Blood or body fluid sample testing (using samples separated from a human body)</td>
<td>Method for controlling medical devices</td>
</tr>
<tr>
<td>Contraceptive methods</td>
<td>DDS</td>
<td>X ray</td>
<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>
</tbody>
</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?
Quizzes 1

• 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.