

Introduction to Intellectual Property Law for Engineers

Todd Rattray

Oyen Wiggs Green & Mutala

www.patentable.com

Oyen Wiggs Green & Mutala

1

- ❖ what are laws?
 - rights
 - obligations
- ❖ enforcement of rights and obligations
 - lawsuits
 - other legal actions

Oyen Wiggs Green & Mutala

2

Forms of I.P.

- ❖ Trademarks
 - Nexus between mark and good/service
- ❖ Designs
 - Ornamental (non-functional) features
- ❖ Copyright
 - Artistic and written works
- ❖ Trade Secrets
 - Must be secret
- ❖ Patents
 - Functionality

Oyen Wiggs Green & Mutala

3

- ❖ what is a patent?
 - bundle of rights
 - monopolistic right to prevent others from making, using or selling the invention claimed in the patent in the jurisdiction covered by the patent
 - patent is not the right to practice the patented invention
- ❖ enforcement of patent rights
 - lawsuits
 - other legal actions
- ❖ why does the government grant the right?
 - incentive to promote development + R&D
 - the patent requires publication of the invention, which can fuel further development + R&D

Oyen Wiggs Green & Mutala

4

- ❖ why should engineers be interested in patents?
 - because engineering companies are interested in patents
 - inventorship/ownership
 - bonuses/stock options
 - promotion/kudos from the boss/R+D funding for the department
- ❖ why are engineering companies interested in patents?
 - acquiring the bundle of rights
 - ability to enforce the bundle of rights
 - attracting capital
 - valuation of the company
 - ability to deal with 3rd parties in relation to the bundle of rights

Oyen Wiggs Green &
Mutala

5

- ❖ what can be patented?
 - patents are for “inventions”
- ❖ “invention” has a legal definition which requires satisfaction of four criteria:
 - patentable subject matter;
 - useful;
 - new/novel;
 - inventive/non-obvious.

Oyen Wiggs Green &
Mutala

6

- ❖ patentable subject matter
 - varies by jurisdiction (i.e. Canada different from US, different from Europe etc.)
 - almost anything useful
- ❖ common subject matter exceptions:
 - scientific principles and theorems;
 - inventions with illicit objects.

Oyen Wiggs Green &
Mutala

7

- ❖ Canadian subject matter exceptions:
 - methods of medical treatment of animals (including humans);
 - use of a computer to perform methods that would otherwise be non-patentable (e.g. using a computer to perform a known calculation that could be performed by a human);
 - higher life forms (e.g. multi-cellular organisms);
 - new rules for games;
 - methods of doing business.

Oyen Wiggs Green &
Mutala

8

- ❖ usefulness
 - technology that is not merely ornamental
 - technology that is not merely artistic
 - almost anything that you would encounter in engineering context will satisfy the utility criteria for patentability

- ❖ novelty:
 - some variance by jurisdiction
 - the invention being claimed cannot have been publicly disclosed anywhere in the world prior to the filing date of the patent application
 - includes public disclosure originating from inventor(s)
- ❖ examples of public disclosure:
 - printed publication – most often in another patent, technical paper, thesis or product promotional material;
 - sale of the technology;
 - offer for sale of the technology (even under Non-Disclosure Agreement);
 - use of the technology in public;
 - oral publication – e.g. thesis defence
 - telling your buddies.

- ❖ exceptions to “absolute novelty” rule:
 - in Canada and US only, there is a limited one year grace period for disclosure that is derived from the inventor(s) – if a public disclosure is derived from the inventor herself, then a Canadian and/or US patent application may be filed up to one year later
 - in US only, may be possible to prove a date of invention that is earlier than the date of the public disclosure event – in all other countries, filing date is the relevant date for assessment of novelty

- ❖ non-obviousness
 - the claimed invention must have been non-obvious to the hypothetical “person skilled in the art” at the time that the patent application was filed
 - the person skilled in the art is deemed to have knowledge of all relevant publications in the field of art, but is assumed to have no “scintilla of inventiveness”

- ❖ the patent process
 - patent search
 - preparing and filing application
 - patent prosecution
 - grant/maintenance/term

- ❖ patent searching
 - the best way to assess whether your technology satisfies the criteria of novelty and inventiveness when compared to the “prior art”
 - “prior art” is all publicly disclosed information
 - not possible to search every resource in the world due to time limitations and financial limitations
 - searches often limited to the US patent office – free online database
 - other database resources that have more sophisticated information available and more sophisticated searching techniques
 - assessment of search results

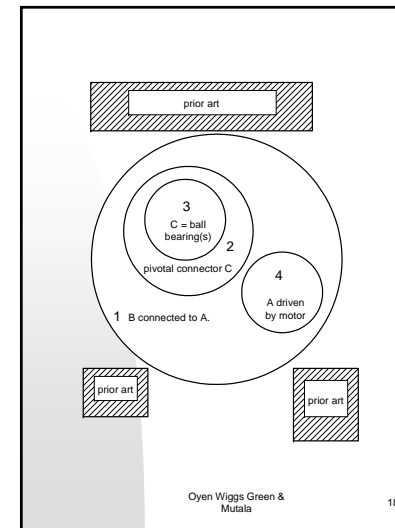
- ❖ preparing and filing patent application
 - select lawyer/agent
 - invention disclosure – technical description of the invention prepared by the inventor(s) – preferably, explains what is novel about the invention in relation to the known prior art and any advantages of the invention in relation to the known prior art
 - iterative preparation of patent application
 - file the application
 - as soon as application is filed, the product may be marked “patent pending”

- ❖ parts of a patent application:
 - description: explains background art in the field, describes what is considered to be the invention and describes at least one “preferred embodiment” of the invention
 - drawings: aid with explaining the preferred embodiment of the invention
 - claims: group of sentences, each sentence setting out (in words) the legal monopoly sought by the patent application
 - claims must define an “invention” that satisfies the novelty and non-obviousness criteria – therefore at least one “feature” from each claim must distinguish the “prior art”

- ❖ two types of claims:
 - independent claims
 - dependent claims
1. A widget comprising:
 - (a) an element A; and
 - (b) an element B connected to A.
 2. A widget as in claim 1 further comprising an element C for pivotally connecting B to A.
 3. A widget as in claim 2 wherein C comprises one or more ball bearings.
 4. A widget as in claim 1 wherein A is driven by an electric motor.

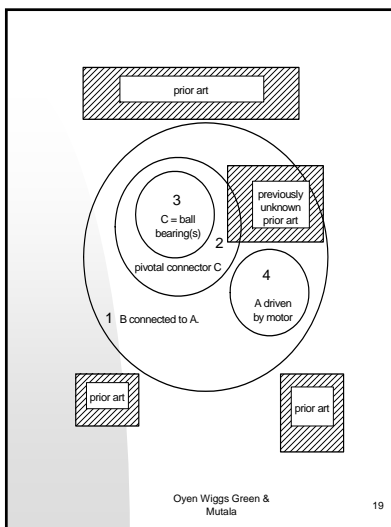
Oyen Wiggs Green & Mutala

17



Oyen Wiggs Green & Mutala

18



Oyen Wiggs Green & Mutala

19

- ❖ claim drafting strategy:
 - try to obtain the broadest possible conception of the invention while still satisfying the criteria of novelty and non-obviousness
 - use dependent claims to narrow the invention and to create different logical claim branches
 - this is another reason for performing a patentability search prior to preparing the patent application

Oyen Wiggs Green & Mutala

20

- ❖ prosecution:
 - office actions – patent office
Examiner conducts independent search to determine whether or not claimed invention (i.e. each claim) meets the novelty and non-obviousness criteria
 - responses to office actions – typically amend the claims of the patent application and/or submit arguments directed to persuading Examiner that the language of the claims recites one or more “features” not shown in the prior art
 - duty to disclose prior art to the patent office
 - at the end of the prosecution, hopefully the Examiner issues a Notice of Allowance at which point the government charges an issue fee

Oyen Wiggs Green &
Mutala

21

- ❖ grant/maintenance/term
 - once issue fee paid, patent is granted by relevant patent office
 - term of patents now 20 years from the filing date
 - in order to keep a patent in force, it is necessary to pay periodic maintenance fees (essentially government taxes)
 - in Canada – maintenance fees are annual fees commencing on the 2nd year anniversary of the filing date
 - in US – maintenance fees due at 3½, 7½, 11½ years

Oyen Wiggs Green &
Mutala

22

- ❖ Now I have a patent – so what?
 - patent is a monopolistic right to prevent others from making, using or selling the claimed invention in the jurisdiction covered by the patent
- ❖ right may be used as an asset by assignment or license
- ❖ assignment:
 - transfer of ownership in the patent and its associated right for \$\$\$
 - transfer document(s) should be registered in the relevant patent office

Oyen Wiggs Green &
Mutala

23

- ❖ license:
 - contract where patent ownership is retained, but patent owner promises not to enforce the right against a particular 3rd party (the licensee) in exchange for \$\$\$ or something else of value
 - \$\$\$ derived from license agreement typically referred to as “royalties”
 - can be “exclusive license” or “non-exclusive license”
 - can be limited geographically, by sales volumes etc. - limited only by the fact that the contract must be legal
 - may or may not be registered at the relevant patent office

Oyen Wiggs Green &
Mutala

24

- ❖ patent rights may be enforced by lawsuit
 - often lawsuits settle and result in licensing arrangement, but sometimes lawsuits are litigated to completion – more often in USA, where stakes are higher and damage awards greater

- ❖ although frequently, a patent owner makes, uses or sells the patented product or process, ownership of a patent does not necessarily give the patent owner the right to practice the claimed invention, because 3rd parties may have a broader patent
 - example:
 - > A invents a new chemical composition that is useful as an adhesive (e.g. “crazy glue”) and obtains a patent claiming the chemical composition.
 - > B later discovers that same chemical composition is useful as a method for treating cuts in human flesh and may be used in the place of stitches. B obtains a patent for his inventive method.
 - > B cannot practice his patented method without “using” A’s chemical composition.

- ❖ International considerations:
 - most industrialized countries are parties to a pair of important agreements: the *Paris Convention for the Protection of Intellectual Property* and the *Patent Cooperation Treaty*
 - the *Paris Convention* provides that a person can file a patent application in a first country on a first date and that person will have up to one year in which to file one or more additional patent applications in one or more additional countries and it will be as though the person filed the additional application on the same day as the first application
 - the *Patent Cooperation Treaty* sets up a regime where a person can file a single application in English which will act as a place holder for up to 30 months before filing individual patent applications in member countries

- ❖ Conclusions
 - variety of forms of intellectual property
 - patents are useful and important business tool for engineering companies
 - patents grant the right to prevent others from making, using or selling the claimed invention
 - patentable invention must be useful, novel and non-obvious
 - useful to search before applying for patent
 - useful to use a patent lawyer/patent agent for preparing, filing, prosecuting a patent application
 - international patent protection may be obtained