Primer on Patents
Princeton Center for Information Technology Policy

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President Barack Obama signs the America Invents Act, Friday September 16, 2011, at Thomas Jefferson High School for Science and Technology in Alexandria, VA.
Agenda

- Background
- Patent Basics
- Patent Procurement
- Patent Enforcement
- Final Thoughts
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Primary Types of Intellectual Property

- Patent
- Copyright
- Trademark
- Trade Secret
US Constitution, Article 1, Section 8

The Congress shall have power...to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.
Rights Conferred

- Sometimes referred to as “negative rights”
  - A patent does not represent the right to make, use, or sell the patented invention
  - A patent represents the exclusive right to prevent others from making, using, selling, offering for sale, or importing the patented invention
Policy

- In essence, a patent is a contract between the patentee and the public

- Quid pro quo for the grant of exclusive rights is the publication of a complete description of the invention
  - Short term restriction on competition v. long term promotion of innovation
  - Need for balance in ease of obtaining and enforcing patents - meritless patents impact the public
  - Consider product cycles and open source software
Types of Patents

- Utility
- Design
- Plant

- Going forward, unless otherwise specified, “patent” refers to US “utility patent”
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**Essential Facts**

- US patents are governed by federal law
- US patent applications are examined, and US patents are issued, by the US Patent & Trademark Office (USPTO)
  - Most patent applications are published 18 months after filing
  - 47-64% of patent applications result in a patent
  - Patent application pendency averages 34-41 months
  - USPTO is under-resourced
Traditional Total Pendency by Technology Center

Technology Centers

1600 - Biotechnology and Organic Chemistry
1700 - Chemical and Materials Engineering
2100 - Computer Architecture, Software, and Information Security
2400 - Computer Networks, Multiplex communication, Video Distribution, and Security
2600 - Communications
2800 - Semiconductors, Electrical and Optical Systems and Components
3600 - Transportation, Construction, Electronic Commerce, Agriculture, National Security and License & Review
3700 - Mechanical Engineering, Manufacturing, Products
Term

- Patents expire 20 years from date of patent application filing
- Cannot be renewed
- Patents are expensive
  - USPTO fees are incurred throughout patent prosecution
  - Maintenance fees are required to prevent a patent from premature lapse
**Scope**

- Claims define the scope of a patent, analogous to the way deeds define real property

- Most patents include a “rainbow” of claims because of the uncertainties of examination
  - One examiner per patent application
  - System assumes examiner is aware of all “prior art”
  - Patents may be invalidated after issuance
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Requirements of a Patent

- Patentable subject matter
- Utility
- Novelty
- Non-obviousness
- Disclosure
Patentable Subject Matter

- Composition of matter
- Machine
- Process
- Manufacture

- Supreme Court: laws of nature, natural/physical phenomena, and abstract ideas are not patentable
- Consider life forms, software, business methods, and tax strategies – not precise
Utility

- Invention must achieve a specific utility
  - Easy to satisfy
Novelty

- Unpatentable if invention previously patented, disclosed in a printed publication, in public use, on sale, or otherwise available to the public
  - Single prior art reference must include all elements of the claimed invention
  - Subject to grace period
  - First to invent v. first inventor to file
  - No secret prior art, no geo restriction
  - Rapidly growing body of prior art, including program code
Nonobviousness

- Invention cannot be obvious to one of ordinary skill in the art to which the invention pertains
  - Allows for the combination of prior art references, but which combinations are permissible is not precise
  - Appropriate level of ordinary skill is not precise
  - Common source of disagreement among examiner, applicant/patentee, and alleged infringer
Disclosure

- The specification shall contain a written description of the invention...as to enable any person skilled in the art to which it pertains...to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

  - Under-enforced
  - Failure to disclose best mode is no longer a basis for invalidity
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**Patent Infringement**

- Practice of every element of at least one patent claim
  - Intent is not an element of infringement
  - An infringer need not even be aware of the existence of the patent
  - Products can infringe multiple patents – particularly as relates to information technology
Claim Breadth

- Best possible claim: Anything!
- Worst possible claim: Everything!
  - Rainbows of claims – stool example
  - Patent valuations vary considerably
Many Claim Limitations . . .

US 6,112,225

1. A method performing a computing task comprising operations of:
   a coordinating computer receiving an aggregate computing task divisible into multiple independent subtasks;
   announcing an opportunity for other computers to participate in the aggregate computing task, and in response, one or more subscribing computers submitting requests to participate in the aggregate computing task, the subscribing computers including one or more computers having principal functions distinct from the aggregate computing task;
   the coordinating computer receiving the requests from subscribing computers, and in response, the coordinating computer assigning the subtasks by distributing the subtasks among the subscribing computers, and also sending an idle time activation program to each subscribing computer;
   each subscribing computer installing the idle time activation program, each subscribing computer installing the idle time activation program, whereupon the idle time activation program causes the subscribing computer to perform operations including working toward completion of the assigned subtask when the subscribing computer is in a predefined idle state with respect to the subscribing computer's principal functions, and halting work toward completion of the assigned subtask when the subscribing computer is not in the predefined idle state; and
   in response to each subscribing computer's completion of its assigned subtask, transmitting results of the completed subtask to the coordinating computer.
Few Claim Limitations . . .

US 5,424,054

3. A hollow carbon fiber having a wall consisting essentially of a single layer of carbon atoms.
Claim Types

- Composition of matter
- Machine
- Process
- Manufacture
  - Consider who directly infringes
  - Consider Beauregard and signal claims
United States Patent

Amiss et al.

METHOD OF EXERCISING A CAT

Inventor: Kevin T. Amiss, 255 S. Pickett St., #301, Alexandria, Va. 22304; Martin H. Abbott, 10240 Assembly Dr., Fairfax, Va. 22030

Appl. No.: 144,473
Filed: Nov. 2, 1993

Int. CL. 29/490
U.S. CL. 119/717
Field of Search 119/702, 701, 134, 905; 446/485

References Cited

U.S. PATENT DOCUMENTS
3,877,171 4/1975 Stoep et al. 446/485
4,206,706 6/1980 Schnick
4,215,077 10/1980 Joyce et al...
4,357,515 7/1983 Hughes
4,761,715 8/1988 Bocactus
4,926,438 5/1990 Marks et al...
4,983,029 1/1991 Hoevle
5,056,297 1/1991 Mayne

ABSTRACT

A method for inducing cats to exercise consists of directing a beam of invisible light produced by a handheld laser apparatus onto the floor or wall or other opaque surface in the vicinity of the cat, then moving the laser so as to cause the bright pattern of light to move in an irregular way fascinating to cats, and to any other animals with a chase instinct.

5 Claims, 1 Drawing Sheet

OTHER PUBLICATIONS


Primary Examiner—Todd R. Manahan

Patent Number: 5,443,036
Date of Patent: Aug. 22, 1995

November, 2011
Valuable?

Claim 1

A method of inducing aerobic exercise in an unrestrained cat comprising the steps of:

(a) directing an intense coherent beam of invisible light produced by a hand held laser apparatus to produce a bright highly-focused pattern of light at the intersection of the beam and an opaque surface, said pattern being of visual interest to a cat; and

(b) selectively redirecting said beam out of the cat’s immediate reach to induce said cat to run and chase said beam and pattern of light around an exercise area.
Remedies for Infringement

- Monetary damages
  - Lost profits
  - Reasonable royalties
  - Enhanced for willfulness

- Injunctions
  - Not automatic

- Consider thickets, patents per product, and profit margins
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Challenges to Patent Validity

- During pendency of patent application

- After grant but still before the USPTO
  - Ex parte reexamination (prior art basis)
  - Inter partes reexamination (prior art basis)
  - Post grant review (beyond prior art, no time limit for business methods)

- During litigation
  - Failure to comply with requirements for patentability, except for best mode requirement
Prior User Rights

- Personal defense to patent infringement
- Expanded by AIA from business methods to all patents
- Exception for patents owned by universities
If Time Permits

- **New business models**
  - Non-practicing entities (trolls)
  - Defensive patent entities

- **Innovation cycles**
  - Technical standards for interoperability
  - Patent pools
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Some Provisions Deleted from America Invents Act

- Litigation Related
  - Damages reform
  - Venue
  - Willful infringement
  - Permanent injunction
  - Inequitable conduct
  - Interlocutory appeals of claim construction

- USPTO Related
  - Fee diversion
  - USPTO substantive rule-making authority
  - Applicant submission of search and patentability analysis
Thank You! Questions?