Patent Resources and Services at A Patent and Trademark Depository Library (PTDL)

Lisha Li
Presented for the Outreach Council
Georgia Tech Library
Oct. 2010
Outlines

- IP Definitions and Terminology
- Sample Patents
- Patent Classifications
- Patent Statistics
- PTDL and PTDL
- Patent Search Systems
Intellectual Property (IP)

- Intellectual Property (IP): refers to creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce.
  - 1) **Industrial property** (patents, trademarks, industrial designs, etc.);
  - 2) **Copyright** (literary works such as novels, poems and plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs).
Foundation of Intellectual Property

- “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.”

- Article 1, Section 8 of the United States Constitution
A legal right given to an author, artist, composer, or programmer, to exclude others from publishing or copying literary, dramatic, musical, artistic, or software works.

**Copyright Terms:**
- **70 years** from the death of the last surviving author (for works created after 1/1/1978)
- **28-95 years** depends (for works originally created and published or registered before 1/1/1978)
What is Not Protected by Copyright

- Names of products, services, business, or organizations.
- Names of persons
- Titles of works
- Ideas, plans, procedures, methods, systems, processes, concepts…
- Single words or short phrases, slogans, mottoes
- Familiar symbols or designs
- The idea for games or the names of games.
A trademark is any word, phrase or design, or a combination of those that is consistently associated with a product and identifies and distinguishes that product from others in the marketplace.

A service mark is the same as a trademark, except that it identifies and distinguishes the source of a service rather than a product.
Examples of Trademark Refusal

- The mark is:
  - merely ornamental
  - merely a surname
  - the name, image or signature of a deceased president of the U.S.
  - merely descriptive or deceptively mis-descriptive of the goods and services

- The mark:
  - consists of immoral, or scandalous matter
  - resembles an active mark registered with the PTO to cause confusion, mistake.
## Trademark Term

<table>
<thead>
<tr>
<th></th>
<th>Registration</th>
<th>Renewal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before 11/16/1989</strong></td>
<td>20 years</td>
<td>20 years</td>
</tr>
<tr>
<td><strong>After 11/16/1989</strong></td>
<td>10 years</td>
<td>10 years</td>
</tr>
</tbody>
</table>

**Notes:**

For a trademark registration to remain valid, an Affidavit of Use ("Section 8 Affidavit") must be filed: (1) between the 5th and 6th year following registration, and (2) within the year before the end of every 10-year period after the date of registration. The registrant may file the affidavit within a grace period of 6 months after the end of the 6th or 10th year, with payment of an additional fee.

The registrant must also file a §9 renewal application within the year before the expiration date of a registration, or within a grace period of 6 months after the expiration date, with payment of an additional fee.
Trade Secrets

- Any information, design, device, process, composition, technique, or formula that is not known generally and that affords its owner a competitive business advantage.
Patent

- A grant of **property right** by the government to the inventor (or his heirs or assigns), acting through the Patent and Trademark Office. The assignee of the patent has the right **to exclude others from making, selling, or using the invention for a limited period of time**, usually **20 years** from the time of application. This right extends throughout the United States and its territories and possessions.

- Patents represent the latest advances in technology and as such are indicators of the leading technology in any field and are an excellent resource for researchers.
Definitions

- **Prior Art:**
  - State of knowledge existing or available before the date of an invention.

- **Patentee**
  - The inventor; the person to whom the patent has been granted. As a piece of intellectual property a patent is considered a property right and can be bought, sold, willed to heirs, etc. The patentee is not necessarily the assignee of the rights to the patent.

- **Assignee**
  - The recipient of the patent rights (owner). The assignee may be a U.S. or foreign company or individual of the U.S. or a foreign government. The assignee is not necessarily the inventor of the invention being patented. Many inventors assign the rights to their inventions over to other individuals or institutions.
Abbreviations

- **USPTO** - U.S. Patent and Trademark Office
- **EPO** – European Patent Office
- **JPO** – Japanese Patent Office
- **WIPO** - World Intellectual Property Organization
- **USPC** - U.S. Patent Classification
- **IPC** – International Patent Classification
- **PTDL** - Patent and Trademark Deposit Library
- **PTDLP** – Patent and Trademark Deposit Library Program
Patentability Requirements

  - processes (methods);
  - machines;
  - articles of manufacture;
  - compositions;
  - “new use” of one of the above

- Novelty
  - Must be different from the prior art
  - No prior publication, use or sale more than one year before application in the U.S.

- Non-obviousness
  - Not obvious to a person skilled in the art

- Usefulness
  - Must be able to accomplish object of invention
  - Must be practical

- Full disclosure
Examples of What Is Not Patentable

- Inventions disclosed to the public more than 12 months prior to filing in the U.S.
- Laws of nature
- Non-useful inventions
- Inventions that are vital to national security
- Unsafe drugs
- Atomic weapons (U.S. Atomic Energy Act 1954)
Three Types of U.S. Patents

- **Utility Patent** (1790-):
  - Granted to anyone who invents or discovers *any new and useful* process, machine, article of manufacture, or composition of *matter*, or any new and useful improvement thereof. (>7,000,000)

- **Design Patent** (1842-):
  - Granted to anyone who invents *a new, original, and ornamental* design for an article of manufacture. (>500,000)

- **Plant Patent** (1930-):
  - Granted to anyone who *invents or discovers and asexually reproduces* any distinct and new variety of *plant*. (>10,000)
## Patent Terms

<table>
<thead>
<tr>
<th></th>
<th>Utility and Plant Patents</th>
<th>Design Patents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1790-1836:</td>
<td>14 years</td>
<td>1842-1861:</td>
</tr>
<tr>
<td>1836-1861:</td>
<td>14 years + year ext.</td>
<td>1861-1981:</td>
</tr>
<tr>
<td>1861-1995:</td>
<td>17 years</td>
<td>1981-present:</td>
</tr>
<tr>
<td>1995-present:</td>
<td>20 years from filing</td>
<td></td>
</tr>
</tbody>
</table>
Patent Fees Example

Utility Patents - For small entity:

- Basic filing fee: $165;  $82 (e-filing)
- Independent claims in excess of three: $110
- Utility Examination Fee: $110
- Patent Maintenance Fees:
  - 3.5 years: $490
  - 7.5 years: $1,240
  - 11.5 years: $2,055
- Miscellaneous Patent Fees: varies
(Note: AN=application number; AD=application date)

Source: Dialog
The First U.S. Patents

- Granted on July 31, 1790.
- Patent No.: X1
- Inventor: Samuel Hopkins (1743-1818)
- Signed by President George Washington.
- A patent on an improvement "in the making of [Pot ash] and [Pearl ash] by a new Apparatus and Process."
Manner of Bouying Vessels
Inventor: Abraham Lincoln
Patented: May 22, 1849
Patent No.: 6,469

Abraham Lincoln's Patent Model: Improvement for Bouying Vessels Over Shoals

© National Museum of American History
Telegraph
Inventor: S.F.B. Morse
Patented: May 1, 1849
Patent No.: 6,420

© National Museum of American History
Sewing Machine
By James Perry
Patented: Nov. 23, 1858
Patent No.: 22,148
Adding Machines
Inventor: Jabez Burns
Patented: Aug. 24, 1858
Patent No.: 21243
Washing Machine
Inventor: A.J. Stafford and S. Crossman
Patented: Jan. 9, 1866
Patent No.: 51977
Creeping Baby Doll
Inventor: George Pemberton Clarke
Patented: Aug. 29, 1871
Patent No.: 118,435
Design Patent

- Statue
- Inventor: Auguste Bartholdi
- U.S. Patent #: D11,023
- Patented: Feb. 18, 1879
Camera
Inventor: George Eastman
Patented: Sept. 4, 1888
Patent No.: 388,850
Suspension Bridge
Inventor: E.E. Runyon
Patented: Feb. 10, 1891
Patent No.: 446,209
Smoke Consuming Locomotive
Patented: Dec. 25, 1894
Patent No.: 531,555
- Refrigeration
- Inventor: Albert Einstein et al.
- Patent No.: 1,781,541
- Patented: Nov. 11, 1930
Television System
Inventor: P.T. Farnsworth
Patented: Aug. 26, 1930
Patent No.: 1,773,980
Design of A Bottle
Inventor: Eugene Kelly
Patented: Aug. 3, 1937
Patent No.: D105,529
Method for treating pain
Assignee: Eli Lilly and Company
Patented: August 24, 1999
Patent No.: 5,942,530

The present invention provides a method for treating pain using a composition comprising certain phenyl oxazoles or phenyl thiazoles in combination with a Drug Useful in the Treatment of Pain.
Method and apparatus for refetching data

Assignee: Apple, Inc.

Patented: Oct. 5, 2010

Patent No.: 7,809,893

FIG. 3

processes (methods)
• Probe sensor with multi-dimensional optical grating
• Inventor: Wang, Zhong L. et al
• Assignee: Georgia Tech Research Corporation
• Patent No.: 7,808,656
• Patented: Oct. 5, 2010
Method and Means for Creating Anti-gravity Illusion
Inventor: Michael J. Jackson
US Patent No.: 5,255,452
Granted: Oct. 26, 1993
Walk the Dog

- Pet Umbrella and Combined Pet Leash and Umbrella
- Patent No.: 6,871,616
- Patented: Mar. 29, 2005
- USPC: 119/795
• Halloween backpack  
  Patent No.: 5878931  
  Patented: March 9, 1999

• Beerbrella  
  Patent No.: 6,637,447  
  Patented: Oct. 2003
• Office Gym Exercise Kit
• U.S. Patent # 7,137,935
• Patented: Nov. 21, 2006
A safe method of stopping a stolen car without chasing at high speeds, utilizing a bar code implanted between the inner layer and outer layer of a rear safety glass is comprised of steps: 1) scan the barcode, 2) compare the read in barcode with those of the stolen cars stored in the police computer net, 3) trigger one of the three stopping means of this invention. Those three stopping means are: 1) turn off the engine, 2) puncture the rear tires with bullets, and 3) puncture the rear tires by mechanical means.
Surface Pattern Applied to a Doughnut Pastry

Claim:
The ornamental design for a surface pattern applied to a doughnut pastry, as shown and described.
Asexual reproduction: "Creating a plant using techniques such as grafting, budding, or using cuttings, layering, or division without using seeds. Plant offspring will be substantially identical to the parent."
US Patent Classification (USPC) System

- A Patent Classification is a code which provides a method for categorizing the invention.
- A classification is used both as a tool for finding patents (patentability searches), and for assisting in the patent application examination purposes.
- USPC consists of over 450 classes and 100,000 subclasses.
- Revised continuously to reflect the changing technologies.
- Format: **Class / Subclass**
- US-to-IPC Concordance – relates individual USPC classes and subclasses to the most closely corresponding IPC classifications.
- *Just released (Oct. 25, 2010):* USPTO and EPO work toward Joint Patent Classification System to align the U.S. and the EPO classification systems with the IPC.
### Class 73
#### MEASURING AND TESTING

504.02. Angular rate using gyroscopic or Coriolis effect:
This subclass is indented under subclass 488. Subject matter wherein the determination of the time rate of change in position of the body is made by (1) rotating or (2) linearly moving an inertial element with respect to the body and measuring reaction forces on the element produced by rotation of the body about an axis of rotation.

504.12. Vibratory mass:
This subclass is indented under subclass 504.02. Subject matter wherein the inertial member is caused to rapidly reciprocate or oscillate about an axis of motion.

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<table>
<thead>
<tr>
<th>488</th>
<th>SPEED, VELOCITY, OR ACCELERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>489</td>
<td>Recording or registering interrelated factors</td>
</tr>
<tr>
<td>490</td>
<td>With distance registering means</td>
</tr>
<tr>
<td>491</td>
<td>With means for retaining reading</td>
</tr>
<tr>
<td>492</td>
<td>Maximum acceleration</td>
</tr>
<tr>
<td>493</td>
<td>Structural installation or mounting means</td>
</tr>
<tr>
<td>494</td>
<td>Installed in rotary speed source</td>
</tr>
<tr>
<td>495</td>
<td>Indicating diverse conditions</td>
</tr>
<tr>
<td>496</td>
<td>Vibration control or antistick means for reading structure</td>
</tr>
<tr>
<td>497</td>
<td>Temperature compensator</td>
</tr>
<tr>
<td>498</td>
<td>Adjusting means for reading structure</td>
</tr>
<tr>
<td>499</td>
<td>Illuminated reading device</td>
</tr>
<tr>
<td>500</td>
<td>Liquid surface is or moves reading</td>
</tr>
<tr>
<td>501</td>
<td>Surface of revolving liquid body</td>
</tr>
<tr>
<td>502</td>
<td>Externally connected pressure gauge gives reading</td>
</tr>
<tr>
<td>503</td>
<td>Means integrating time and acceleration</td>
</tr>
<tr>
<td>503.3</td>
<td>Gyroscope</td>
</tr>
<tr>
<td>504.01</td>
<td>Angular rate using wave or beam motion (e.g., Sagnac type)</td>
</tr>
<tr>
<td>504.02</td>
<td>Angular rate using gyroscopic or Coriolis effect</td>
</tr>
<tr>
<td>504.03</td>
<td>Multisensor for both angular rate and linear acceleration</td>
</tr>
<tr>
<td>504.04</td>
<td>Vibratory mass</td>
</tr>
<tr>
<td>504.05</td>
<td>Fluid or fluent inertial mass (e.g., electrons, ions, plasma)</td>
</tr>
<tr>
<td>504.06</td>
<td>Fluid jet</td>
</tr>
<tr>
<td>504.07</td>
<td>Rotary</td>
</tr>
<tr>
<td>504.08</td>
<td>Rotary gyroscope</td>
</tr>
<tr>
<td>504.09</td>
<td>Gimbal support</td>
</tr>
<tr>
<td>504.11</td>
<td>Flexible rotor or flexibly mounted rotor</td>
</tr>
<tr>
<td>504.12</td>
<td>Vibratory mass</td>
</tr>
<tr>
<td>504.13</td>
<td>Hollow circular-shaped inertial element</td>
</tr>
<tr>
<td>504.14</td>
<td>Elongated element with spaced supports</td>
</tr>
<tr>
<td>504.15</td>
<td>Cantilever</td>
</tr>
<tr>
<td>504.16</td>
<td>Tuning fork</td>
</tr>
</tbody>
</table>
Patent Search Template for Class 73: An Example

- U.S. patent resources
- Foreign patent resources
- Non-patent literature resources:
  - American National Standards Institute
  - ASTM International
  - DIALINDEX
  - IBM Technical Disclosure Bulletin
  - IEEE Xplore
  - Inspec (The Database for Physics, Electronics and Computing)
  - IP.com
- Non-patent literature resources (cont’d):
  - NIST
  - STN index
  - Experimental methods for engineers
  - Mechanical measurements
  - Theory and design for mechanical measurements
  - Ultrasonic testing of materials
- Internet search tools:
  - Google
  - Scirus
  - Yahoo!

(http://www.uspto.gov/web/patents/searchtemplates/class073-all.htm)
Newer class added:
Class 903
Established: Aug. 2005
CROSS-REFERENCE ART COLLECTION(S):
902-927, 930, 940-948, 951, 952, 960
International Patent Classification (IPC) System

- The IPC divides technology into eight sections with \(~71,000\) subdivisions.
- Provides an internationally uniform classification of patent documents
- Hierarchical arrangement
- Indispensable for the retrieval of patent documents in the search for "prior art."
- Used by patent-issuing authorities, potential inventors, research and development units, and others concerned with the application or development of technology.
IPC Sections

A
SECTION A — HUMAN NECESSITIES

B
SECTION B — PERFORMING OPERATIONS; TRANSPORTING

C
SECTION C — CHEMISTRY; METALLURGY

D
SECTION D — TEXTILES; PAPER

E
SECTION E — FIXED CONSTRUCTIONS

F
SECTION F — MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING

G
SECTION G — PHYSICS

H
SECTION H — ELECTRICITY

G 01 P 9 / 04

section
Class
subclass
group
subgroup
IPCGroup/Subgroup Example

SECTION G — PHYSICS

Note(s)

1. In this section, the following term is used with the meaning indicated:
   • "Variable" (as a noun) means a feature or property (e.g., a dimension, a physical condition such as temperature, a quality such as density or colour) which, in respect of a particular entity (e.g., an object, a quantity of a substance, a beam of light) and at a particular instant, is capable of being measured; the variable may change, so that its numerical expression may assume different values at different times, in different conditions or in individual cases, but may be constant in respect of a particular entity in certain conditions or for practical purposes (e.g., the length of a bar may be regarded as constant for many purposes).

2. Attention is drawn to the definitions of terms or expressions used, appearing in the notes of several of the classes in this section, in particular those of "measuring" in class G01 and "control" and "regulation" in class G05.

3. Classification in this section may present more difficulty than in other sections, because the distinction between different fields of use rests to a considerable extent on differences in the intention of the user rather than on any constructional differences or differences in the manner of use, and because the subject dealt with are often in effect systems or combinations, which have features or parts in common, rather than "things", which are readily distinguishable as a whole. For example, information (e.g., a set of figures) may be displayed for the purpose of education or advertising (G09), for enabling the result of a measurement to be known (G01), for signalling the information to a distant point or for giving information which has been signalled from a distant point (G08). The words used to describe the purpose depend on features that may be irrelevant to the form of the apparatus concerned, for example, such features as the desired effect on the person who sees the display, or whether the display is controlled from a remote point. Again, a device which responds to some change in a condition, e.g., in the pressure of a fluid, may be used, without modification of the device itself, to give information about the pressure (G01L) or about some other condition linked to the pressure (another subclass of class G01, e.g., G01K for temperature), to make a record of the pressure or of its occurrence (G07C), to give an alarm (G06B), or to control another apparatus (G05). The classification scheme is intended to enable things of a similar nature (as indicated above) to be classified together. It is therefore particularly necessary for the real nature of any technical subject to be decided before it can be properly classified.

G01P

MEASURING LINEAR OR ANGULAR SPEED, ACCELERATION, DECELERATION, OR SHOCK; INDICATING PRESENCE, ABSENCE, OR DIRECTION, OF MOVEMENT (measuring or recording blood flow A61B 5/02, A61B 8/06; monitoring speed or deceleration of electrically-propelled vehicles B60L 3/00; vehicle lighting systems adapted to indicate speed B88Q 1/54; determining position or course in navigation, measuring ground distance in geodesy or surveying G01C, combined measuring devices for measuring two or more variables of movement G01C 23/00; measuring velocity of sound G01H; measuring velocity of light G01J 7/00; determining direction or velocity of solid objects by reflection or reRadiation of radio or other waves and based on propagation effects, e.g. Doppler effect, propagation time, direction of propagation, G01S; measuring speed of nuclear radiation G01T; measuring acceleration of gravity G01V)

Note(s)

1. This subclass covers measuring direction or velocity of flowing fluids using propagation effects of radio waves or other waves caused in the fluid itself, e.g. by laser anemometer, by ultrasonic flowmeter with "sing-around-system". [4]

2. Attention is drawn to the Notes following the title of class G01.

G01P 9/04
• using turn-sensitive devices with vibrating masses, e.g. tuning-fork
# The Volume of Patent Information

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patent applications filed world wide</td>
<td>1.5 million/year</td>
</tr>
<tr>
<td>Number of patent documents published from the beginning</td>
<td>~50 million</td>
</tr>
<tr>
<td>Total U.S. patents issued in FY2009</td>
<td>190,121</td>
</tr>
<tr>
<td>Average U.S. patent pendency (utility)</td>
<td>35 months</td>
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<tr>
<td>Average U.S. trademark pendency</td>
<td>13.5 months</td>
</tr>
</tbody>
</table>
International Patents Landscape

Patents Granted World Wide (2002-2006)

Source: The Trilateral Co-operation (http://www.trilateral.net/)
Proportion of Applications Per Fields of Technology

Source: The Trilateral Co-operation (http://www.trilateral.net/)

PROPORTION OF APPLICATIONS PER FIELDS OF TECHNOLOGY
(2007-2008)

EPO
- Human necessities
- Chemistry, metallurgy
- Physics

JPO
- Performing operations, transporting
- Fixed construction

KIPO
- Textiles, paper
- Mechanical engineering

USPTO
- Electricity
- 1%
PCT: Patent Cooperation Treaty

- **PCT application**
  - international application filed under the Patent Cooperation Treaty.

- **PCT Chapter II**
  - a chapter in the Patent Cooperation Treaty specifying the procedure where the applicant can request that an international preliminary examination be carried out by a competent International Preliminary Examination Authority.

- **PCT international search**
  - search carried out on a PCT international application to discover the documents or other types of disclosures that may affect the patentability of the claims.

- **PCT Protest**
  - a reasoned statement filed, together with the additional search or examination fee, by the applicant opposing a decision of lack of unity of invention made by the International Searching Authority or the International Preliminary Examining Authority.
Flow of Patent Applications


Source: The Trilateral Co-operation (http://www.trilateral.net/)
U.S. Patenting Trends (1999-2009)
Top Countries of Origin Receiving the Most U.S. Patents in CY 2009

- Japan: 38,066
- Germany: 10,353
- South Korea: 9,566
- Taiwan: 7,781
- Canada: 4,393
- United Kingdom: 4,011
- France: 3,805
- China, People's Republic: 2,270
- Italy: 1,837
- Netherlands: 1,558
- Australia: 1,550
- Israel: 1,525
- Switzerland: 1,454
Top Organizations with Most U.S. Utility Patents

Top 20 Organizations with Most Utility Patents Granted in 2009

- IBM
- Samsung
- Microsoft
- Canon
- Panasonic
- Toshiba
- Sony
- Intel
- Seiko Epson
- Hewlett-Packard
- Fujitsu
- LG Electronics
- Hitachi
- Ricoh
- GE
- Micron Technology
- Cisco
- Fujifilm
- Honda
- Broadcom
All Patents by South East States (By State)

Source: USPTO
Top Patenting U.S. Universities

Top 20 Patenting U.S. Universities in Calendar Year 2005

Source: USPTO
Top Patenting Universities 2009

<table>
<thead>
<tr>
<th>Ranking &amp; Movement</th>
<th>Universities</th>
<th>Technology Strength™</th>
<th>Current Impact™</th>
<th>Science Linkage™</th>
<th>Innovation Cycle Time™</th>
<th>Patents Granted</th>
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<tr>
<td></td>
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<td>2009  5-Year Average</td>
<td>2009  5-Year Average</td>
<td>2009  5-Year Average</td>
<td>2009  5-Year Average</td>
<td>2009  5-Year Average</td>
</tr>
<tr>
<td>2 ▲</td>
<td>MIT/Mass Inst of Technology</td>
<td>219      276</td>
<td>1.53</td>
<td>1.94</td>
<td>26.66</td>
<td>21.99</td>
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<tr>
<td>1 ▼</td>
<td>University of California</td>
<td>213      350</td>
<td>0.79</td>
<td>0.90</td>
<td>33.14</td>
<td>22.11</td>
</tr>
<tr>
<td>4 ▲</td>
<td>Stanford University</td>
<td>143      136</td>
<td>1.13</td>
<td>1.34</td>
<td>17.83</td>
<td>18.50</td>
</tr>
<tr>
<td>3 ▼</td>
<td>California Inst of Technology</td>
<td>122      173</td>
<td>1.29</td>
<td>1.46</td>
<td>35.48</td>
<td>23.04</td>
</tr>
<tr>
<td>6 ▲</td>
<td>University of Texas</td>
<td>95       115</td>
<td>0.94</td>
<td>1.09</td>
<td>31.35</td>
<td>34.72</td>
</tr>
<tr>
<td>9 ▲</td>
<td>University of Wisconsin</td>
<td>92       73</td>
<td>0.79</td>
<td>0.83</td>
<td>18.93</td>
<td>18.34</td>
</tr>
<tr>
<td>23 ▲</td>
<td>University of North Carolina</td>
<td>77       50</td>
<td>1.11</td>
<td>1.13</td>
<td>35.75</td>
<td>25.32</td>
</tr>
<tr>
<td>11 ▲</td>
<td>Georgia Institute of Technology</td>
<td>74       67</td>
<td>1.23</td>
<td>1.40</td>
<td>10.38</td>
<td>9.38</td>
</tr>
<tr>
<td>14 ▲</td>
<td>Cornell University</td>
<td>63       54</td>
<td>0.85</td>
<td>1.02</td>
<td>28.07</td>
<td>25.69</td>
</tr>
<tr>
<td>12 ▲</td>
<td>University of Michigan</td>
<td>61       74</td>
<td>0.90</td>
<td>0.94</td>
<td>33.72</td>
<td>30.24</td>
</tr>
</tbody>
</table>

Patenting by State – State of Georgia, Breakout by Top Technology Class

- Telephonic communications
- Multiplex communications
- Multicomputer data transferring
- Drug, bio-affecting and body treating compositions
- Communications: electrical
- Registers (calculator, etc.)
- Stock materials
- Chemistry: molecular biology and microbiology
- Database, file management.. .(data processing)

Source: USPTO
Patents Granted to Georgia Tech

Number of Patents Granted to Georgia Tech (1990-2009)

Source: CASSIS
PTDLP and PTDL

- **PTDLP**: Patent and Trademark Depository Library Program
- **Patent Act**: 1870
- Congress ordered the Commissioner of Patents “to have copies of patents printed, some for free distribution to libraries.” (Jan. 1871)
- Patent and Trademark Depository Library (PTDL) are authorized by 35 U.S.C. 12 to:
  - disseminate patent and trademark information
  - support diverse intellectual property needs of the public
PTDLP and PTDL (cont’d)

A PTDL is designated to:

◦ Receive and house copies of U.S. patents and patent and trademark materials
◦ Make them freely available to the public
◦ Actively disseminate patent and trademark information

Recognition as a PTDL is derived from the provisions of Title 35, Section 12 of the U.S. Code, which allows for the distribution of patent copies to libraries for an annual statutory fee of $50.
• Early years: 22 libraries, mostly public libraries.
• Today: 80+ PTDLs, with about 50% in academic libraries.
• GT Library became a PTDL in 1946. It is the only PTDL in GA.
Obligations of PTDLs

- Pledge to acquire a minimum of a 20-year back file collection of U.S. utility patents issued 20 years prior to the date of designation.
- Make access to patents and trademarks and all other depository materials freely available to the public.
- Protect the integrity of the collection so that the patents and trademarks and other documents and publications provided to each PTDL by the USPTO remain available to the public.
- Maintain a collection of the classification systems and other patent and trademark related publications and documents which are critical to the effective utilization of patent and trademark files.
Obligations of PTDLs (cont’d)

- Retain any depository copies of patents until, at the initiative of the library, disposal of them has been arranged through the USPTO.
- The USPTO retains the right of first refusal to acquire any materials, including microform, being relinquished by a library, where such materials were acquired under the provision of 35 USC 12.
- Be in a position to assist the public in the efficient use of the patent and trademark collections and of the associated information access tools.
- Provide institutional support to permit a PTDL representative to attend the annual USPTO-sponsored PTDL training seminars at the USPTO.
The Benefits of PTDL

- A rich local resource for university and governmental laboratories, small businesses, research and development firms, and independent inventors and entrepreneurs.
- An active PTDL brings the newest technology in the form of patents to many potential users in a city, state or entire region.
- Patents also provide a unique body of scientific and technical literature that adds value and stature to a library's collection.
- Access to trademark information provides a service in high demand by local businesses.
- The availability of high quality patent and trademark information services often attracts new communities of library users with the potential for new sources of library support.
Who Are the Users of PTDLs?

- Individual inventors
- Students
- Researchers
- Entrepreneurs
- Businessmen
- Patent attorneys and agents
- Historians
- General public
Research Topic Examples

- Patents related theses/dissertation by GT graduate students
  - Patent statistics as technology indicators: analysis of the patenting of multinational enterprises selected from the USA, Japan and West Germany in the pharmaceutical and electrical power systems industries (HST thesis, 1983)
  - Uses and nonuses of patented inventions (PP Dissertation, 2009)

Source: SMARTech
Research Topic Examples (cont’d)

• Patents related articles/papers
  ◦ Software Patents: Good News or Bad News? (CoM faculty working paper, 2004)
  ◦ The R&D process in the US and Japan: Major findings from the RIETI-Georgia Tech Inventor Survey (PP faculty working paper, 2009)

Source: SMARTech
Examples of Questions

- “I want to find out if my grandfather had a patent on....”
- “Can you help me file a trademark registration?”
- “My daughter has a wonderful idea. How can she file a patent application?”
- “I would like to file a patent application for my idea. But I don’t know too much about computers...”
Patents and Trademark Materials

PTDLs Receive

- Utility, Design, Plant and Reissue Patents
- Reexamination Certificates
- Statutory Invention Registrations (SIRs*)
- Post-issue patent status information
- Access to the Official Gazette of the U.S. Patent and Trademark Office (both patent and trademark sections)
- All USPTO search tools, indices and directories

(All of the above are distributed in a variety of formats including: print, microfilm, microfiche, DVD and diskette.)

*An applicant for an original patent may request, at any time during the pendency of applicant’s pending complete application, that the specification and drawings be published as a statutory invention registration.
Assistance PTDL librarians Provide

- A PTDL is **required** to assist the public in the efficient use of the patent and trademark collections and of the associated information access tools
- Training is offered to
  - classes of students
  - inventors
  - small business owners
  - researchers and other professionals
What We Don’t Do at PTDL

- Offer legal advice
- Perform the patent search for an inventor
- Warrant the completeness of the search or the patentability of an invention
- Assist in writing the patent application
- Recommend a patent attorney
- Ask about the details of an invention
Services at Georgia Tech PTDL

- **One-on-one training** and assistance in classification searching to help inventors or researchers conduct their own patent or trademark search
  - walk-in
  - by appointment
    - Mon.-Fri., 8 am - 6 pm

- **Advice on non-patent databases** to consult for prior-art search

- **Classes**
  - general
  - course-specific by request

- **Seminars and workshops**
Coming Up Workshops

Patents and Trademarks 101:

A Free Seminar for Inventors, Entrepreneurs, Educators, Students and Legal Professionals

Wednesday, November 3, 2010
Student Center Theater
Georgia Institute of Technology

Sponsored by the Georgia Tech Library and Information Center, a Patent and Trademark Depository Library (PTDL) and in collaboration with the United States Patent and Trademark Office (USPTO), the seminar will cover patent and trademark searching, navigating the USPTO website, and other issues related to intellectual property, such as copyright and trade secrets.

Whether you’re an inventor, entrepreneur, patent attorney, student, professor or other interested individual, this workshop will demonstrate different ways to search for patents and trademarks by strengthening your current skills base. For those new to the process, you will learn how to conduct patent and trademark searches.

Program Overview:

  8:30am  Registration
  9:00am  Welcome – Dean of Georgia Tech Library
  9:10am  Overview of Patents, Trademarks, Copyrights and Trade Secrets
  9:45am  Video: Promoting Innovation: Today’s USPTO
  10:00am Conducting a Patent Search Using the USPTO Website
  11:30am Lunch (on your own)
  1:00pm  PTDL Resources at Georgia Tech Library
  1:15pm  IP Ecosystem, Entrepreneurs, and Sustainable Technology Companies
  1:45pm  Federal Trademarks: Conducting a Trademark Search Using the USPTO Website
  3:00pm  Invention Promotion Firms: How to Ask the Right Questions
  3:30pm  Local Resources for Inventors Panel
  4:30pm  Adjournment

To be assured of a seat at the workshop, please REGISTER by Friday, October 22nd, 2010 at: http://library.gatech.edu/ptdlnetwork (additional information about speakers, programs, directions, parking, restaurants, hotels and contact can also be located at this website).

For questions, please contact the Patents Coordinator at patentscoordinator@library.gatech.edu or 404-894-7183.

• Patents and Trademarks Workshop on Nov. 3rd, 2010 at Student Center Theater – open to the public

• Researching Patent and Trademark Information - a hands-on seminar on Nov. 4th, 2010 at HRC – for librarians and staff
Patent Databases

- **Free Online**
  - USPTO web site
  - Google Patents (U.S. patents)
  - esp@cenet (EPO, international)
  - Patent Scope (WIPO, international applications)
  - Freepatentsonline (U.S., EPO, JPO, WIPO-PCT)

- **PTDL Only**
  - PubWEST
  - CASSIS
Electronic databases available worldwide from the USPTO*

- **USPTO Web Patent Database**
  - Full-page images of each page of all US patents issued since 1790
  - Full-text of all US patents issued since January 1, 1976
  - Full-text of all US published applications since March 2001
  - Access to the Patent Application Information Retrieval (PAIR) System, the US register of legal status

- **Trademark Electronic Search System (TESS)**
  - Access to the same text and image database of trademarks as currently provided to examining attorneys at the USPTO via the X-Search system

* [www.uspto.gov](http://www.uspto.gov)
USPTO Web

- Including both granted and pending U.S. patents
- Granted patents:
  - Full-text (searchable) from 1976 -
  - Images from 1790- (only searchable by patent number and class)
- Applications: Full-text (searchable from 2001- )
- Granted patents are posted every Tuesday; Published applications are posted every Thursday.
  - + Classification searching tools
  - + Updated weekly
  - - Requires special viewer (AlternaTIFF) to view images
Google Patents

- A search engine from Google that indexes patents and patent applications from the United States Patent and Trademark Office (USPTO)
- About 7 million patents in the database.
- Optical character recognition (OCR) has been performed on the patent pages to make them searchable.

- + Good response time and PDFs
- + pre-1976 data OCRd
- - Not complete indexing; not updated as often as USPTO
Worldwide coverage of 80+ countries (coverage varies by country)
- Bibliographic and patent identification information
- Cannot search by U.S. class and must covert to IPC
- Updated weekly
+ Includes patents from US, EPO, JPO…
- Abstracts may not be included for all patents
- Full-text searching is not available
PubWEST

- WEST stands for Web-based Examiner’s Search Tool, an internal USPTO database for use by USPTO patent examiners.
- PubWEST is the “public” version of WEST offered only in the Public Search Facility and PTDLs.
- Full Text back to 1920 (USPTO website only provides full-text access back to 1976)
- Access to all foreign patent images stored in the Foreign Images database
  - + Multiple databases, and foreign patents searching
  - + Precision search (using proximity operators)
  - + Grid display and data download features
- - Requires special login; Can ONLY be searched through a PTDL computer station
CASSIS

- **CASSIS** (Classification And Search System Information Service) - a CD/DVD-ROM system available at PTDL libraries to assist users with their patent and trademark searches.
- CASSIS’s update varies, depending on the file (from weekly, monthly, bimonthly, quarterly, to annually)
- + Batch sorting, downloading in variety of formats.
CASSIS Files

- CASSIS contains:
  - Patents BIB File – bibliographic information on patents granted by the U.S. (1969 - )
  - Trademarks BIB - bibliographic Information from abandoned, canceled, expired, pending, and registered US Trademarks
  - Patents CLASS - classification information on patents including the complete list of patents granted to any class and subclass (1790 - )
  - Patents ASSIST Files - the Classification Definitions, the Manual of Classification and the Index in electronic format, and other files related to patent information
CASSIS Files (cont’d)

- **Patents ASSIGN** File: US Patents recorded at the USPTO (1980- ) ★
- **Trademarks ASSIGN** Files— US Patents recorded at the USPTO (1955- ) ★
- **USAPat** - image of granted U.S. patents (1790 - ) ★
- **USAAApp** - images of U.S. patent applications publication (2001- ) ★
- **eOG:P** - Annual Index and Cumulative Electronic Official Gazette ★
- **USAMark** – images of registered U.S. trademarks ★
- **Annual Index of Patents** ★

- bimonthly ★
- monthly ★
- weekly ★
- quarterly ★
- annually ★
Additional Resources on the Web

- Patents and Trademarks Research Guide: [http://libguides.gatech.edu/patent_guide](http://libguides.gatech.edu/patent_guide)
References

QUESTIONS?
THANK YOU!