Intellectual Property and Commercialization

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Is Your Idea the Next Google or Facebook?

It depends.....
Agenda

- What is Intellectual Property
  - Ownership and rights
  - Patent types
- Overview of McGill’s IP policy
- IP and Sponsored Research
- Commercialization
  - Office of Sponsored Research
  - From invention disclosure to licensing or a spin off
  - Stats
  - Considerations
What is Intellectual Property?

• Definition
  – Any product of human intellect that is unique, novel, non-obvious and valuable

• Types of intellectual property (IP)
  – Copyrights
  – Patents
  – Trademarks
  – Design registrations
  – Integrated circuit topographies
  – Trade Secrets
  – Know-how
Copyrights

- Original works
- Acquired when created
- Granted for the life of author plus 50 years in Canada
- Can be registered
Patent

- Right to exclude others from commercial use
- Incentive for inventors
- 20 year life
- Country specific:
  - United States: First to invent
  - Rest of the world: First to file
Patent

• Criteria
  – Subject matter
  – Novel
    • Prior art, public disclosure
    • US and Canada allow one year grace
    • Japan under certain restrictions
    • Rest of the world requires absolute novelty
  – Non obvious / Inventive
    • Someone of ordinary skill would not know how
  – Useful
What is patentable Vs what would McGill patent?

• Patentable
  – Almost anything
• McGill’s criteria
  – Likelihood of commercial success
  – Strength of patent claims
  – Freedom to operate
  – Inventor’s participation
  – No ego patents
Trademarks

- Words, symbols and graphics
- Can last indefinitely
- Country specific
Design Registrations and Integrated Circuit Topographies

• Design registrations
  – Feature, shape, configuration, pattern etc.
  – Must be registered

• Integrated Circuit Topographies
  – Registering the layout
Trade Secrets and Know How

• Trade secret
  – Recipes, databases, marketing plans, etc...

• Know how
  – A skill or ingenuity known only to a limited number of people
McGill’s IP Policy (1)

• 14 pages on how McGill deals with IP
• Approved by the Board of Governors and overseen by a Senate Committee in May 2001
  – Currently being revamped
• Developed through consultation with all stakeholders
• http://www.mcgill.ca/research/researchers/policies/
• So what do you need to know ......
McGill’s IP Policy (2)

- Applies to academic staff, administrative and support staff and students
- Governs the use and distribution of IP
- Directs how McGill and the inventors can benefit financially from the commercial development
McGill’s IP Policy (3)

• You can choose whether or not to commercialize your IP
  – Exception if work is developed under a research contract

• If your invention is outside your research area or you developed it independently from McGill staff or resources
  – No obligation to McGill
• Yes students have rights!
  – Granted under Canadian Law
  – But there are some restrictions
• Applies to students only if:
  – They have contributed with one or more author to a work
  – They have contributed with one or more inventor to an invention
  – They have created an invention they wish to develop with the help of the University
McGill’s IP Policy (5)

• Copyrights
  – Authors own copyrights
    • Exceptions are: software, sponsored research, specific arrangements and McGill’s right to use for research and teaching
  – Moral Rights
    • Owned by author but maybe waived under contract

• Software and Inventions
  – Jointly owned with McGill and/or third party
    • Exceptions are: result of activities covered or not by contract of employment, sponsored research, consulting agreement, outside of field of academic research and teaching
  – Learnware dealt with on a case by case basis
IP and Sponsored Research

• IP
  – Background IP
    • Belongs to each: industrial partner and McGill
  – Foreground IP
    • Created during the project, can be jointly owned
  – McGill’s IP rights
    • Maintain right for research use and teaching

• Confidential Information
  – Non disclosure agreements

• Publication
  – Right to review prior to submission
Commercialization

- Why commercialize university IP?
  - Industrial validation of research resulting in real world applications
  - Benefits to society
    - Incentive to innovate
      - Peer and industrial visibility
    - Generate employment
    - Support SMEs not only large companies
    - Create economic benefits
  - Criterion for promotion and advancement
  - Become stinking rich!
Office of Sponsored Research

• Former OTT +
  – Commercialization group
  – Research and Contracts Group

• Commercialization Group
  – Receives and assesses reports of inventions
  – Manages McGill’s intellectual property
  – NDA’s, MTA’s related to commercial endeavours
  – Licenses, options and spin-offs
    • Transfer of inventions and software from McGill and affiliated hospitals to the industry
The commercialization funnel

- Research Grants &
  Industrial Research Contracts
- ROIs
- Patents
- Licenses
- Spin-Offs

Technology Risk
Investment
Time

McGill
The Process (1)

- **Report of Invention disclosure to OSR’s Commercialization Group**
- **Assignment of an Officer**
  - initial meeting within 30 days
  - 90 day review period
  - Brief analysis
    - Technical
      - Benchmark with state of the art
      - Feasibility
    - Commercial
      - Market size, maturity
      - Likelihood of success, unmet need
- **Patentability**
  - Prior art, freedom to operate
• Summary report presented by researcher and officer to an unbiased Commercialization Committee. The outcome:
  – Decline
    • Reassignment to inventor
  – Defer
  – Proceed
    • Preparation of a development and commercialization plan by researcher and officer and filing of provisional patent application
    • Go/NoGo review and decision in 12 months
Why you may not want to disclose...

• “If I disclose I can’t publish”
• Too much paperwork involved
• Time consuming
• No guarantee my invention will be protected
• “I don’t have the funds to patent”
• Patents are not yet formally recognized for tenure or by academic peers
Who is an inventor?
• Someone who has created something new or contributed intellectually
• What is an intellectual contribution?
  – Enabling an idea vs. “demonstration of the idea”
  – Enabling is if someone of “ordinary skill-in-art” could make or use without undue amount of research or experimentation
• Authorship does not equal inventorship
Additional considerations (2)

**Best practices**
- Come see us early
- Keep good records
- Keep your discussions within McGill
- Think about NDAs and MTAs

**Not so good practices**
- Coming at the 11th hour with an article, abstract or presentation you want to protect
- Not include all inventors or include non-inventors
Open-source distribution is not considered commercialization

Can you really commercialize your software?
- Did you use some open-source code, under which OS license?
- Did you have access to or do you need some software licensed for academic purposes only?
- Did you properly identify all authors/collaborators?
- Does your software infringe some patent rights?
- Who paid you to develop the software? Do they have some rights to the software?
- Disclosure is much less of an issue than with patent, but software distribution certainly is.
Practical Issues (2)

• Software Commercialization Models
  – End-user licenses: software licensed as is, with no warranty and no tech support commitment of any kind. How much would you pay for this?
  – In some cases, software can also be patented
  – License can be given only to the compiled version, to be used as a library with public interfaces
  – License to a third-party that will “productize” your software. The value: proof of concept + significant savings in software development time
Key Metrics: Inventions Reported Annually

- 1900 cumulative reported inventions
- Over 100 inventions reported annually
Key Metrics: Inventions Reported by Faculty

- FAC. SCIENCE 19%
- FAC. ENGINEERING 17%
- FAC. MEDICINE 19%
- FAC AG. & EN. SCIENCES 14%
- RESEARCH HOSPITALS 25%
- OTHER 6%
Spin-Offs and Key Discoveries

- The genesis of major drugs in clinical practice is attributable to McGill research & innovation.
  - 3TC
  - Gancyclovir
  - Butorphanol
  - Carcinogenic Embryonic Antigen (CEA) assay

- McGill intellectual property is at the origin of over 50 start up companies; over 40 of which continue operations (10 IPOs).
Contact Us

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Thank you for your attention!

QUESTIONS ?
What happens then?

• Inventors assign their rights to McGill (ROI)
• McGill manages the commercialization
  – Cost, liabilities and agreements
• Team effort to market the invention
  – Go/NoGo milestones
• Net revenue is shared
  – First $10k to inventors
  – 60% to inventors and 40% to McGill
• Reassigned Inventions
  – 80% to inventors and 20% to McGill for $100k