

Intellectual property management, 2002/2003 fiscal year

1 General Information

1.1 Establishments generating, managing or commercializing IP

This survey covers intellectual property arising from the R&D activities of Federal Natural Science-Based Departments and Agencies. Please list the names of the organizations (directorates, services, R&D establishments, etc.) included in your figures. *Use an additional sheet of paper, if required.*

Also, indicate whether or not they are engaged in intellectual property management (identification, protection, promotion or commercialization).

Name of establishment	Engaged in IP management	
	Yes	No
	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>

1.2 IP management infrastructure and expenditures

1.2 a. In your organization, intellectual property management, (including identification, promotion and commercialization) is conducted by (*check one*):

- The individual establishment
- A corporate-level office
- An external organization (*please specify*): _____
- A combination of the above

1.2 b. For each level, indicate the resources dedicated to IP management. "Full-time equivalents" (FTEs) is an estimate of the number of person-years. "Expenditures on patent applications" include patent searches. "Legal costs" include costs of patent filing, examination, prosecution and litigation. Patent-related expenditures such as maintenance, monitoring and enforcement should be included under "other operational costs". *Please see the Respondent Guide for a detailed description of the categories.*

Organization level	Employees dedicated to IP management (FTEs)	Operational expenditures for IP management				Total operational expenditures for IP management
		Salaries (corresponding to FTEs)	Expenditures on patent applications	Legal costs	Other operational expenditures	
(\$ thousands)						
Corporate						
Separate establishments						
Other (<i>please specify</i>) _____						

1.3 Contracts and collaborative arrangements

R&D contracts often result in intellectual property being created in the form of inventions, computer software, databases, published papers, etc. This section requests information on the role of contracts and collaborative arrangements in your organization.

We will obtain information on R&D contracted out from the main Federal Science Expenditures and Personnel survey.

For the purpose of this survey,

- "contracting in" refers to arrangements in which your organization is paid by an outside organization to conduct R&D activities;
- "contracting out" refers to arrangements in which your organization pays an external contractor to conduct R&D activities;
- "collaborative arrangements" are formal joint R&D activities not covered by "contracting in" or "contracting out".

a. What are your organization's policies concerning intellectual property resulting from R&D contracted in? That is, who owns the rights to the intellectual property and who has the first rights to license it?

b. What are your organization's policies concerning intellectual property arising from collaborative R&D arrangements?

c. Who were the sponsors of the R&D contracts undertaken during the reference year?

R&D contracted in from:	Number of contracts	Value of contracts (\$ thousands)
Federal government		
Provincial and other levels of Canadian government		
Canadian business		
Other Canadian organizations		
Foreign governments		
Foreign business		
Other foreign organizations		
Multi-stakeholder groups (e.g., consortia)		
Other (please specify) _____		

1.4 Barriers to commercialization

Please indicate your agreement with the following statements on the barriers and challenges to IP management

Barrier	Strongly Agree	Agree	Disagree	Strongly Disagree
1. Policy				
1.1 Federal laws and regulations restrict the abilities of departments to fully exploit their IP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.2 Federal laws and regulations deter companies from commercializing IP developed by government	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.3 The poor understanding of IP and technology transfer policies leads to perceived barriers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.4 There is a lack of compliance with reporting regulations (e.g., information about inventions is published before protected)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.5 There is a poor linkage to commercial lending organizations and venture capitalists	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1.6 There is a lack of flexibility for inventors and innovators to commercialize	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. IP Management Resources				
2.1 There is a lack of resources (monetary/personnel) to identify and manage IP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.2 There is a lack of experience in identifying technologies that have a high potential for success	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.3 Staff involved in technology transfer require further training in IP identification, patent law, IP regulations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.4 Technologies that have a potential for success are not identified sufficiently early	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Revenue Retention				
3.1 Commercialization is impeded because departments are not able to take an equity position in a company	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.2 Deferring payment of royalties until the technology is commercialized creates a perception that the IP has not been successful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.3 Inventors and innovators are not adequately rewarded for their participation in the development and transfer of technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Receptors' Capabilities				
4.1 Few Canadian SMES have both the resources and the skills necessary to commercialize technologies originating in federal labs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.2 Canadian companies believe they should obtain royalty-free licenses because they pay taxes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.3 There are insufficient mechanisms to help start-up companies in commercializing leading-edge technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.4 There is no means for early contact with potential users	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Others (please specify) _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2 Identifying intellectual property**2.1 Reports and disclosures**

Indicate the number of new reports or disclosures, during the reference year, of intellectual property arising from in-house R&D activities, R&D contracting and collaborative R&D activities. *The types of IP are defined more fully in the Respondent Guide.*

Type of intellectual property reported	Number of reports of IP arising from		
	In-house activities	Contracts	Collaborative activities
Inventions			
Computer software or databases			
Literary, artistic, dramatic or musical works, books, papers			
Educational materials			
Industrial designs			
Trademarks			
Integrated circuit topographies			
New plant varieties			
Know-how			
Other (please specify): _____			

3 Protecting intellectual property**3.1 IP Protection activities**

Has the organization engaged in any of the following forms of intellectual property protection over the past 5 years? Check YES in the column provided, whether or not the action was completed. *These are more fully defined in the Respondent Guide.*

Protection activity	Yes	No
Filing patent applications	<input type="radio"/>	<input type="radio"/>
Prior art searches	<input type="radio"/>	<input type="radio"/>
Patent prosecutions	<input type="radio"/>	<input type="radio"/>
Patent cooperation treaty applications	<input type="radio"/>	<input type="radio"/>
Application for registration of copyright for computer software or databases	<input type="radio"/>	<input type="radio"/>
Application for registration of copyright for literary, artistic, dramatic or musical works, books or papers	<input type="radio"/>	<input type="radio"/>
Application for registration of copyright for educational materials	<input type="radio"/>	<input type="radio"/>
Application for registration of integrated circuit topographies	<input type="radio"/>	<input type="radio"/>
Filing for protection of trademarks	<input type="radio"/>	<input type="radio"/>
Application for registration of integrated circuit topography	<input type="radio"/>	<input type="radio"/>
Filing application for plant breeder's rights	<input type="radio"/>	<input type="radio"/>
Materials transfer agreement	<input type="radio"/>	<input type="radio"/>
Signing non-disclosure or confidentiality agreement	<input type="radio"/>	<input type="radio"/>
Other (please specify) _____	<input type="radio"/>	<input type="radio"/>

3.2 Intellectual properties resulting in protection activity

During the reference year, how many intellectual properties resulted in protection activity?

Type of intellectual property	Number that resulted in protection activity
Inventions	
Computer software or databases	
Literary, artistic, dramatic or musical works, books, papers	
Educational materials	
Industrial designs	
Trademarks	
Integrated circuit topographies	
New plant varieties	
Know-how	
Other (please specify): _____	

3.3 Patents

a. During the reference year, how many patents were applied for and issued to the organization? International (for example, Patent Cooperation Treaty applications, PCT) and regional applications (e.g., European Patent Office applications) should be counted as **single applications**.

Field of technology	New patent applications in:				Patents issued in:			
	Canada	US	Other foreign	Total applications	Canada	US	Other foreign	Total issued
Commerce, management, business, administration								
Agriculture and biological sciences and technologies								
Engineering and applied sciences								
Health professions, sciences and technologies								
Mathematics and physical sciences								
All other fields not elsewhere classified								
Total								

b. Patents held and patents pending

	Canada	US	Other foreign	Total
Total patents held (including patents issued during the reference year)				
Total patents pending				

4 Licenses**4.1 New and active licenses**

Please report the number of new licenses executed during the reference year and the number of active licenses at the end of the reference year. If detailed figures are not available, please report totals in the appropriate cells. See the Respondent Guide for detailed definitions of "Canadian" and "foreign". If in doubt, please provide the name of the licensee and Statistics Canada will assign the appropriate classification.

	Exclusive or sole license	Non-exclusive or multiple license	Total
1. New licenses (total of 1.a + 1.b)			
a. New licenses with Canadian licensees, of which were			
i) sponsors of research contracts, contractors or collaborators			
ii) not involved in generating the technology being licensed			
b. New licenses with foreign companies			
2. Active licenses (total of 2.a + 2.b)			
a. Active licenses with Canadian licensees, of which were			
i) sponsors of research contracts, contractors or collaborators			
ii) not involved in generating the technology being licensed			
b. Active licenses with foreign companies			

4.2 Sources of technologies

What were the sources of the technologies upon which the new licenses are based?

Technology source	Total new licenses
In-house activities	
External activities (contracting out)	
External activities (contracting in)	
Collaborative activities	
Multiple sources	
Other (please specify) _____	
Total (this total should match the total number of new licenses above)	

4.3 Royalties received

During the reference year, what was the total amount of royalties received from active licenses? Include license issue fees, running royalties, software and database end-user license fees, and any other royalties.

	Canadian licensees	Foreign licensees	Total
Royalties received from IP arising from:	\$ thousands		
In-house activities			
External activities (contracting out)			
External activities (contracting in)			
Collaborative activities			
Multiple sources			
Other (please specify) _____			
Total			

5 Impacts of IP transfer

5.1 Spin-offs

New companies are often formed to commercialize technologies that are owned by public sector organizations. Spin-offs can result from several institutional arrangements:

- **Licensing:** A new company is formed to license and commercialize the organization's technology (these are sometimes called start-ups)
- **R&D** – A new company funds research at the organization to develop technologies that it plans to license.
- **Service** – a new company is formed to provide a service that was originally offered through the organization. This also includes employee takeovers, or companies that are started by former employees on an arrangement to commercialize the technology.

List the legal names of spin-off companies incorporated within the past 10 years, their year of incorporation, the company status (conceptual stage, early stage, active, merged, inactive, closed), technology sector (refer to the technology sector classification provided for Question 3.3) and the institutional link (licensing, R&D, service or other).

Legal name	Year incorporated	Company status	Technology sector	Institutional link

Use additional sheets of paper, if necessary.

Respondent guide

This questionnaire, in general, covers the intellectual property generated from R&D activities. We acknowledge that commercializable IP arises from other activities as well and that it may be difficult to differentiate. Whenever possible, please report figures for IP generated from R&D activities. If this is not possible, please note that the figures include IP generated from non-R&D activities.

If exact numbers are not readily available, please provide estimates with a note indicating this.

Please do not leave any question blank. Enter zero responses with the digit "0" if the value is known to be zero. If the data are not available, enter "N/A". In cases where the question is not applicable, please indicate this.

Report all dollar amounts in Canadian dollars (generally in thousands).

Notes on survey questions

1. This is to determine the overall coverage of the response. If only part of the organization is covered, please note this here. If discernable groups within the organization generate IP, please list them here.
- 1.2b. The term "operational expenditures" is intended to capture all expenditures except for those on capital equipment. The sub-categories are as follows:
 - Salaries
 - Expenditures on patent applications, including:
 - Initial description and reporting of invention
 - Inventor determination
 - Patent searches
 - Prior art searches
 - Patent validation
 - Legal Costs, including:
 - Patent application preparation
 - Patent filing (Domestic and off-shore)
 - Patent examination and prosecution
 - Litigation
 - Other operational expenditures, including:
 - Case administration
 - Patent maintenance
 - Awards management
 - Monitoring, enforcement and exploitation
 - Patent infringement
 - Total - this should be the sum of the above

1.3 Intellectual property includes:

- **"Invention"** means any new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of matter (Public Servants Inventions Act. R.S., c. P-31, s. 1.). Some inventions are patentable in some jurisdictions but not in others: these include novel genetically-engineered life forms, new microbial life forms, methods of medical treatment and computer software.
- **Copyrightable intellectual property** has been broken into three groups:
 - **Computer software or databases:** As noted above, computer software can be patented but normally it is protected by copyright. Databases may also be copyrighted.
 - **Literary, artistic, dramatic or musical works, books, papers:** This category includes any copyrightable works other than computer software and databases and special educational materials as noted below.
 - **Educational materials:** This category includes special materials that may be copyrighted but are not necessarily in the form of printed books. This could include broadcast lessons, Internet pages, booklets, posters or computer files, among others.
- **Industrial designs:** These are original shapes, patterns or ornamentations applied to a manufactured article. Industrial designs are protected by registration with the Canadian Intellectual Property Office.
- **Trademarks:** These are words, symbols, designs, or combinations thereof used to distinguish your wares or services from someone else's. Trademarks are registered with the Canadian Intellectual Property Office.
- **Integrated circuit topographies:** This is a three-dimensional configuration of the electronic circuits used in microchips and semiconductor chips. Integrated circuit topographies can be protected by registration with the Canadian Intellectual Property Office.
- **New plant varieties:** Certain plant varieties that are new, different, uniform and stable may be protected by registration with Plant Breeders' Rights Office, Canadian Food Inspection Agency.
- **Know-how:** is practical knowledge, technique or expertise. For example, certain information is codified in the patent application but a researcher's know-how could be valuable for commercial optimization of the product. Know-how can be licensed independently of the terms of a related patent.

- 3.1 IP protection activities:
- **Filing patent applications:** The formal request for a patent.
 - **Prior art searches:** Examination of previously published patents.
 - **Patent prosecutions:** All the steps involved in completing a patent application.
 - **Patent cooperation treaty applications:** An application under the international treaty providing for standardized filing procedures for foreign patents in the countries that have signed the treaty.
 - **Application for registration of copyrights:** The formal request for a copyright.
 - **Filing for protection of trademarks:** The formal request for registration of a trademark.
 - **Application for registration of integrated circuit topographies:** The formal request for registration of integrated circuit topographies.
 - **Application for plant breeder's rights:** The formal request for registration of plant breeder's rights.

- **Materials transfer agreement:** A contract between laboratories covering the use of and IP arising from the sharing of biological (genetic) materials.
- **Signing non-disclosure or confidentiality agreement:** A contract between parties intended to avoid the disclosure of proprietary rights, trade secrets or confidential information to a third party.

3.3b **Patents pending:** A label sometimes affixed to new products informing others that the inventor has applied for a patent and that legal protection from infringement (including retroactive rights) may be forthcoming.

4.1 A Canadian business is any business that is incorporated in a Canadian jurisdiction. A foreign business is any business that is not incorporated in a Canadian jurisdiction. "Foreign" includes the United States. A multinational business would be classified as Canadian if it has an operation incorporated in a Canadian jurisdiction.

Completed by _____
Department/Organization _____
Telephone number _____
Fax. number _____
e-mail address _____

Comments _____

