



Science Innovation and Electronic Information Division (SIEID)

Federal Science Expenditures and Personnel 2004-2005

Intellectual Property Management, Fiscal Year 2003-2004

Confidential when completed

Si vous préférez ce questionnaire en français, veuillez nous appeler au (613) 951-2199

Information for respondents

Survey Objective

This survey collects data that are essential to assure the availability of pertinent statistical information to monitor science and technology related activities in Canada and to support the development of science and technology policy. The data collected will be used by federal and provincial science policy analysts.

Authority

This survey is conducted under the authority of the Statistics Act, Revised Statutes of Canada, 1985, Chapter S19.

Confidentiality

Statistics Canada is prohibited from publishing any statistics that would divulge information relating to any identifiable organization without the previous written consent of that organization.

Data sharing agreement

To reduce response burden and to ensure more uniform statistics, Statistics Canada has entered into an agreement under Section 12 of the Statistics Act with Industry Canada for sharing information from this survey. Under Section 12 of the Statistics Act you may refuse to share your information with Industry Canada by writing to the Chief Statistician and returning your letter of objection along with the completed questionnaire in the enclosed envelope.

I hereby authorize Statistics Canada to publish any or all portions of the data supplied on this questionnaire by this department.

¹ Yes ² No

Name	Signature
Official position	Program
Department or agency	

Enquiries to be directed to:

Name	Date	Telephone number
Position/Title	e-mail address	Fax number



1 General Information

1.1 Establishments generating, managing or commercializing IP

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"/>

1.2 IP management infrastructure and expenditures

1.2 a. In your organization, intellectual property management, (including identification, protection, 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.
- "Patent and regular legal expenditures" include those for patent filings, patent searches, registration of copyright, etc.
- "Litigation expenditures" are those related to disputes over patents/other intellectual property and include settlements.

Organization level	Employees engaged in IP management (FTEs)	Operational expenditures for IP management				Total operational expenditures for IP management
		Salaries and benefits (corresponding to FTEs)	Patent and regular legal expenditures	Litigation expenditures	Other operational expenditures	
		(dollars)				
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 in which each party normally pays for the costs of its own participation under the agreement. This includes agreements with universities to allow access to facilities.

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 sponsors	Number of contracts	Value of contracts (dollars)
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)			
<input type="text"/>			

d. Who were the **partners** with which collaborative R&D activities were undertaken during the reference year? "Activities" could be counted as specific agreements or projects. Please estimate the full value of in-kind contributions, such as staff time, travel and use of facilities.

Partners in collaborative R&D activities	Number of partners	Number of activities	Value of contribution (dollars)
Federal government			
Provincial and other levels of Canadian government			
Canadian business			
Canadian universities, hospitals or colleges			
Other Canadian organizations			
Foreign governments			
Foreign business			
Foreign universities, hospitals or colleges			
Other foreign organizations			
Multi-stakeholder groups (e.g., consortia)			
Other (please specify)			
<input type="text"/>			

1.4 Barriers to commercialization

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

Barrier	Strongly Agree	Agree	Disagree	Strongly Disagree
<i>1. Policy</i>				
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 intellectual property 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"/>

Barrier	Strongly Agree	Agree	Disagree	Strongly Disagree
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. Other				
5.1 Other (please specify) _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5.2 Other (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			Number of reports declined
	In-house activities	Contracts	Collaborative activities	
Inventions				
Copyrightable intellectual property				
Computer software or databases				
Educational materials				
Other intellectual properties				
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
1. Filing patent applications	<input type="radio"/>	<input type="radio"/>
2. Prior art searches	<input type="radio"/>	<input type="radio"/>
3. Patent prosecutions	<input type="radio"/>	<input type="radio"/>
4. Patent cooperation treaty applications	<input type="radio"/>	<input type="radio"/>
5. Registration of copyright for computer software or databases	<input type="radio"/>	<input type="radio"/>
6. Registration of copyright for educational materials	<input type="radio"/>	<input type="radio"/>
7. Registration of copyright for other copyrightable intellectual properties	<input type="radio"/>	<input type="radio"/>
8. Filing for protection of trade-marks or official marks	<input type="radio"/>	<input type="radio"/>
9. Registration of integrated circuit topography	<input type="radio"/>	<input type="radio"/>
10. Filing application for plant breeder's rights	<input type="radio"/>	<input type="radio"/>
11. Administration of materials transfer agreement (inbound)	<input type="radio"/>	<input type="radio"/>
12. Administration of materials transfer agreement (outbound)	<input type="radio"/>	<input type="radio"/>
13. Signing non-disclosure or confidentiality agreement	<input type="radio"/>	<input type="radio"/>
14. 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	
Copyrightable intellectual properties	
Computer software or databases	
Educational materials	
Other intellectual properties	
Industrial designs	
Trade-marks and official marks	
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:			Patents issued in:			Total issued
	Initiating	Follow-on	Total	Canada	US	Other	
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, commercialized and pending

	Canada	US	Other foreign	Total
Total patents held (including patents issued during the reference year)				
Total patents pending				
Patents (held or pending) licensed, assigned or otherwise commercialized during the reference year				

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".

	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 Income received from intellectual property

a. Please specify the **nature of the income** received during the reference year from intellectual property commercialization.

Nature of income received from IP commercialization	From:		
	Canadian licensees	Foreign licensees	Total
	dollars		
Running royalties			
Milestone payments			
One-time sale of IP (in exchange for a single payment or several payments)			
Reimbursement of patent, legal and related costs			
License income received from another Canadian institution under a revenue sharing agreement			
Other (please specify) _____			
Other (please specify) _____			
Total			

b. Please specify the **nature of the activity** generating the income received during the reference year from intellectual property commercialization.

Income received from IP arising from:	From:		
	Canadian licensees	Foreign licensees	Total
	dollars		
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.

5.2 Leveraging external investment

During the reference year, how much external investment in the spin-offs (venture capital, angel investment, etc.) was raised with the assistance of the organization?	dollars

6 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.

6.1 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 and benefits
 - Expenditures on patent applications, including:
 - Initial description and reporting of invention
 - Inventor determination
 - Patent searches
 - Prior art searches
 - Patent validation
 - Regular legal expenditures, including:
 - Patent application preparation
 - Patent filing (Domestic and off-shore)
 - Patent examination and prosecution
 - Litigation expenditures
 - 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

2.1 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.
 - **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.
 - **Other intellectual property:** This category includes any copyrightable works other than computer software and databases and special educational materials such as literary, artistic, dramatic or musical works, books, papers.
- **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.

