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PATENT INFORMATION IN SUPPORT OF INVENTIVE AND INNOVATIVE ACTIVITIES: GENERAL INTRODUCTION

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INTRODUCTION

1. I am pleased to be here with you in beautiful Budapest at this very topical Symposium. Thank you for the invitation to share some of our Canadian experiences with you.

2. There is no doubt that good information has always been a critical element of good invention. Now, with the availability of inexpensive technology and communications networks, we are in an era where access to good information is available to most if not all of the world's inventors.

3. What we want to spend some time on this morning is a particular set of organized information, namely the patent information that is available from many of the intellectual property offices around the world.

4. You will forgive me if I concentrate my talk on our experiences in Canada and reference to information from the United States. I confess to no knowledge of information situations in other countries but I expect that the differences are not significant.

REASONS FOR ACCESSING EXTERNAL INFORMATION

5. There are many possible reasons why an inventor or innovator would want to access external information to:

- check on the amount of inventive activity in a given field;
- identify similar (or identical) invention;
- identify other solutions to the same problem;
- look for opportunities to improve invention;
- look for synergistic of associated technologies;
- measure the activity of competitors.

6. All of these are reasonable and all can be significantly addressed through access to the formal patent listings available in many countries.

SOURCES OF PATENT INFORMATION

7. It was not long ago that the only practical means to access the patent holdings was to go to Ottawa in Canada or Washington in the US (or their limited field locations) where all of the patent files were found in large rooms of shelves and cabinets. While the filing systems might be effective and the classification systems helpful, the sheer volume of paper was daunting.

8. Specialists were usually available to assist an individual with their quest but that did not change the issue of dealing with paper volume.

9. More recently there have been attempts to improve access by placing selected information in major North American cities at the public libraries. Typically this data is in microfilm or microfiche form which reduces the volume but does not significantly ease the access problem.

10. Most recently the electronic information age has arrived with the availability of United States patent information database on the World Wide Web courtesy of both the USPTO and IBM.

PATENT SYSTEM INFORMATION

11. The United States patents issued since 1976 can be found on the U. S. Patent Office (USPTO) web site **http://patents.uspto.gov** and includes bibliographic information about the inventor and the abstract of the invention.

12. As a test of the system I decided to see what I could find on intermittent windshield wipers for automobiles. Some of you may be familiar with the patent infringement battle that occurred around this invention a few years ago. A search on "wiper" and "delay" resulted in 35 hits. Changing "delay" to "intermittent" increased the number to 54. Not all of these were for automobile windshield wipers of course.

13. IBM Corporation has also made this data available at **http://patent.womplex.ibm.com**

14. This data goes back to 1971 and also features patent images from the past 17 years. A search on "wiper" and "delay" resulted in 229 hits. "Intermittent" dropped the count to 144.

15. Both of these sites offer Boolean search capability and also the ability to limit the number of years searched. USPTO lets you choose a particular year whereas IBM allows a choice of 1995 and later or 1971 and later.

16. Of the two, the IBM site is a more valuable tool for basic patent examination while the USPTO gives access to a US Manual of Classification database search engine ("wiper" found 39 classifications). This latter can be very useful to an inventor needing to understand where their invention might find additional application.

17. Delay wipers are classed as *CLASS 318,ELECTRICITY: MOTIVE POWER SYSTEMS* The description on the web site begins with a long and very complete definition of the class. Interesting but complex reading!

18. Delay wipers then fall into Subclass 443. The key text for this is:

> ***443***. *Subject matter under the class definition in which means are provided for effecting a motor operation two or more times in succession at regular or irregular intervals of time. (1) Note. This subclass includes those systems of repetitious, periodic, or successive operations of a motor in which once the operation of the motor is initiated, either manually or automatically, the operation will take place a plurality of times by virtue of the inherent law or mode of operation of the control means. (2) Note.*

Where the operation is controlled by some condition-sensitive device and the operation is effected each time a predetermined condition exists but where the condition may or may not exist so that as a result the operation may or may not occur or take place, classification is not herein but in some other appropriate subclass. See subclass 445 herein below, and the subclasses listed in the Search Notes thereto. SEARCH THIS CLASS, SUBCLASS:

19. A general awareness of this language can be very useful when considering the best means of describing the new invention in consultation with a patent agent.

20. At the Canadian Industrial Innovation Centre, this database has become a critical resource for our invention evaluation team. We refer to it for almost every new idea that we see.

21. The only caution is that these databases do not cover patents issued before 1971. However, by noting the cited prior art patents in the earliest available patent on the database, one can get an idea as to whether there is much previous activity. My examination of the earliest available patent for delay wipers on the USPTO showed three earlier citations, dating back to 1967. If I wished, I could then find another way to obtain and examine these patents.

CANADIAN PATENT SYSTEM INFORMATION

22. The Canadian Patent Office (CIPO) is in the process of making available an on-line listing of issued or laid open patents dated later than October 1, 1989. The information is limited at this point, consisting mainly of bibliographic data with no claims, citations or drawings. A search for “wiper” and “delay” or “intermittent” found no patents.

23. The CIPO is in the final stages of a complete computerization of their examination system. It can be hoped that they eventually will allow external access to at least the key information on their database.

24. Through the CIPO home page, there is a great deal of information available relating to patents and the Canadian patent system. For example, the following publications can be accessed:

Patents

Canadian Patents Database
Guide to Patents
How Your Patent Application is Processed [PDF 50KB]
Client Service Commitment [PDF 96KB]
Recent Changes in Canadian Patent Practice
Patent Act on the Justice Canada site
The Manual of Patent Office Practice (Revised: January 1997)
The New Patent Rules for Canada

25. The larger documents are available to down load in Adobe Acrobat (PDF) format. Similar information is available for Trademarks, Copyright and other intellectual property groupings. There is also a small Frequently Asked Questions (FAQ) section.

26. Many other Patent Office web sites also contain similar information pertinent to that country. Of course WIPO itself offers a great deal of information through their own web site.

27. It should be noted that in keeping with Canada's bilingual status, all of the Canadian information is also available in French on the website.

> *"The Canadian Intellectual Property Office (CIPO) has created an innovative interactive software package—"INTELLECTUS"—designed to provide you with valuable information about patents, trade-marks, copyrights, industrial designs and integrated circuit topographies."*

28. This is a downloadable package available on the CIPO web site. I have a demonstration copy with me and would be glad to demonstrate it.

HTTP://XINFO.IC.GC.CA/IC-DATA/MARKETPLACE/CIPO/

LIBRARY HOLDINGS

29. In the USA, the Patent Office has developed a Depository Library Program To quote from their web page:

> *"A Patent and Trademark Depository Library (PTDL) is a library which is designated by the US Patent and Trademark Office (USPTO) to receive and house copies of US patents and patent and trademark materials, to make them freely available to the public, and to disseminate actively both patent and trademark information. To be designated, a library must meet specific requirements and promise to fulfill certain obligations as outlined in the information brochure entitled 'Notes on Becoming a Patent and Trademark Depository Library.' "*
>
> *"The Patent and Trademark Depository Library Program had its beginning in 1871 when the federal statute (35 U.S.C. 13) first provided for the distribution of printed patents to libraries for use by the public. In its early years, twenty-two libraries, mostly public and located east of the Mississippi River, elected to receive copies of printed patents. Since 1977 the PTDL Program has grown to almost four times its original membership. About half of the PTDLs are academic libraries with nearly as many public libraries. There are also a number of state libraries and even special research libraries. All libraries regardless of type must meet the same requirements and obligations."*

30. In Canada the program is not as ambitious, with limited paper, microfiche or microfilm collections in major city and university libraries.

31. Finally I would like to describe what I believe is a very interesting and useful tool that is now becoming available to inventors.

THE "INVENTION MACHINE"

32. Perhaps the most ambitious use of patent information in support of invention activities can be found in the **Invention Machine** software offered to industry by Invention Machine Corporation of Cambridge Mass**.**

33. This software is based on work on the Theory of Inventive Problem Solving undertaken in the 1940s by Russian scientist Genrich Altshuller[1] and extended into software in 1976 by Dr. Valery Tsourikov while at the Radio Engineering College in Minsk. Dr. Tsourikov is now the chief scientist and CEO of Invention Machine Corp.

34. By analyzing about 1.5 million patents held by the Russian and British patent offices, Altshuller was able to identify some 1,350 physical, geometrical and science-engineering effects and 200 inventive principles. This led to the Theory of Inventive Problem Solving (TIPS).

35. Building on this basic theory, Tsourikov codified the information into a computer algorithm that led to the development of the Invention Machine software that is now being used by 400 customers including such large product intensive companies such as Xerox, Eastman Kodak and Motorola.

36. This software does not invent but it presents many new possible approaches to solving a problem that can lead to unique and very inventive solutions. I have seen a number of demonstrations of this software over the years and continue to be impressed with its soundness.

CONCLUSIONS

37. In this brief introduction I have attempted to merely "whet your appetite" for seeking out strategic information that can be of great usefulness to the inventive process. As with all large sources of information, the seeker must spend the time to learn and practice the art of gathering good information in an effective and efficient manner.

38. It is my contention that the process is often as valuable as the result. This then leads to the conclusion that the inventor himself or herself must become their own "information specialist" if they are to gain the maximum from the activity.

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[1] G. S. Altshuller, Creativity as an Exact Science, Gordon and Breach, New York, USA, 1984,88, ISSN 0275-5807.