Patent Information Activity of the Technical Information Retrieval Committee of the Manufacturing Chemists' Association†

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An ad hoc committee of the MCA, formed in 1971 to make a comprehensive survey of the needs of the chemical industry in patent information retrieval services, included among its recommendations a standing committee of the MCA on patent information retrieval. The Technical Information Retrieval Committee of the MCA was started in 1972 with representatives from 35 member companies. Subcommittees of the TIRC were appointed and serve as contacts with organizations providing information services in the patent and technical literature fields of interest to the chemical industry. These subcommittees' activities include consultations, as requested; suggestions for new products and recommendations on proposed products; surveys within the industry to aid in planning new patent services; analysis of the quality of the services; and seminars for users to aid in their understanding and use of the services. The work of the TIRC has been helpful to the chemical industry in obtaining needed information services and improvement of existing services and in informing marketers of patent information of the needs of the industry.

The Manufacturing Chemists Association is a nonprofit industry association representing about 200 chemical producers. It is over 100 years old. It is governed by a Board of Directors and functions through a number of committees. One is the Technical Information Retrieval Committee (TIRC), which is composed of representatives of 35 member companies. The activities of the TIRC are divided among seven subcommittees and all 35 members are on, or represented on, one or more of the subcommittees.

The basic purpose of the TIRC is to encourage improvement in the quality and availability of services relating to the retrieval from published U.S. and foreign sources of patent and other technical information of interest to the chemical industry, excluding any activities or substantive discussion of information relating to particular patents or particular chemicals. In carrying out this purpose the Committee may: (a) develop and recommend to the Board of Directors of the MCA policies and positions with respect to the needs of the chemical industry in the area of technical information retrieval; (b) review and analyze the services offered by vendors of patent and other technical information and suggest improvements in these services for the benefit of the chemical industry; (c) encourage research and development in the area of computer-based retrieval of technical information, especially patent information; and (d) act as a forum for interchange of information relating to technical information retrieval with similar groups in this country and abroad.

The TIRC was preceded by an ad hoc committee on Patent Information Retrieval which was established by the MCA Board of Directors in 1971 to study the problems associated with patent information retrieval. The Committee completed the study late in 1971.

The ad hoc committee was of the opinion that the greatest need in the field of patent information retrieval was for a computer-based patent indexing service for chemicals and related products of the U.S. and the major foreign industrial nations. The ad hoc committee met with representatives of the U.S. Patent Office, the Chemical Abstracts Service, IFI/Plenum Data Corp., Derwent Publications Ltd., and the Chemical Abstracting and Indexing Service of the American Petroleum Institute to discuss the possibilities of developing such a patent indexing service.

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As a result of this meeting, IFI, Derwent, and the Chemical Abstracting and Indexing Service of API submitted proposals for providing improved indexing services. The API Service indicated that the service visualized could be created and requested that MCA subsidize this project. IFI and Derwent indicated that improved and expanded indexing could be provided without subsidy, by increasing the subscription rates for companies desiring these services.

The ad hoc committee was of the opinion that it would be neither necessary nor desirable to set up an independent patent information retrieval service in competition with commercial vendors of such services, in view of the interest expressed by the latter to provide improved indexing services. The ad hoc committee was of the opinion, however, that it would be desirable for MCA to establish a permanent committee to monitor the quality of services offered by the vendors of patent information, to encourage other research and development in the area of computer-based retrieval of information, and to act as a forum for interchange of this information in the chemical industry.

The MCA Board of Directors concurred in the opinions and recommendations of the ad hoc committee and directed the establishment of a Technical Information Retrieval Committee in 1972.

The TIRC has established working relationships with the major suppliers of information of interest to the committee. It has working subcommittees with responsibility of working with the U.S. Patent Office, Chemical Abstracts Service, Derwent Publications Ltd., and IFI/Plenum Data Corp. The management of each of these organizations expressed interest in working with the subcommittees. In addition, a technical subcommittee was established to do a limited amount of research in the area of information retrieval. The Committee maintains liason with the PMA, Textile Users Conference, and The API Information Committee in this country, PDG in Europe, and Japan Patent Association.

The Patent Office Subcommittee has been active in discussions with groups within the U.S. Patent Office concerned with information retrieval, with the patent classification system, and with services within the Patent Office. The subcommittee has served to communicate to the Patent Office problems which have been brought to light by members of the TIRC. These problems may not be unique with members of the committee and may have been brought to the attention of the Patent Office by others. They include delays in obtaining copies of patents, both new and old ones, and difficulties in

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obtaining copies of patent files, some of which have been stored at a location other than Crystal City. Questions concerning the integrity of the collections of patents available in the public search room have also been presented. The Patent Office personnel have been cooperative and have taken appropriate action when possible.

The Technical Subcommittee offered its assistance to a classification group in the Patent Office which was reclassifying subclasses in Class 260 dealing with addition polymers and offered its help in other reclassification projects dealing with polymers.

Members of the subcommittee have attended meetings with U.S. Patent Office staff concerned with information retrieval development and have offered suggestions and comments when requested. They have followed some of the programs within the Patent Office, such as the searcher program, with particular interest.

The Chemical Abstracts Subcommittee has had contact with Chemical Abstract Service on a number of subjects, some of which involved patents.

The possibility of enriching the patent abstracts appearing in *Chemical Abstracts* by including one of the claims was referred to the Subcommittee by Chemical Abstract Services. Opinion within the TIRC was about evenly divided on the value of such an addition. It was not recommended.

The Subcommittee has been investigating the ready availability of all documents abstracted in *Chemical Abstracts*. The possibility of providing microfilm of the foreign patents appearing in *Chemical Abstracts* was considered by the TIRC, and a microfilm publisher offered to make these patents available if enough interest could be found. The proposal involved sale of film to firms wishing to maintain in-house collections and a service bureau with an annual minimum fee for other subscribers. Consideration of the proposal indicated the service would not be feasible.

The Subcommittee called attention to the truncation of the IPC classification of patents in the on-line files which limited its use as a searchable item. The Subcommittee encouraged *Chemical Abstracts* to place its patent concordance on-line.

Following the study of the ad hoc committee in 1971, Derwent made a number of changes in its services, such as the adoption of an integrated search system for the AGDOC, CHEMDOC, and FARMDOC files. Some of these may have been influenced at least in part by discussions with the ad hoc committee.

In addition to its own users' group, Derwent maintains contacts with several industry organizations such as the MCA, API, PMA, and others. Derwent consults with such groups on changes in existing services and proposed services. In addition to participating in these activities, the Derwent Subcommittee of the TIRC has initiated studies of its own on Derwent products. One was a study of Derwent's selection of published, examined Japanese patent applications during a six-month period in 1974–1975 to determine the extent of the coverage. With Derwent's help and understanding, the Subcommittee arranged with a Japanese firm to review the Derwent selections in 13 Japanese patent classes and to report any omissions. The Japanese reports were analyzed by members of the Subcommittee and the results were presented to the TIRC and to Derwent.

The Subcommittee has organized training sessions for searching the Derwent on-line file. Sample search questions designed by the Subcommittee to employ various search techniques are sent to the TIRC before the training sessions. Members are encouraged to search the questions and to discuss their searches at the training sessions.

The Subcommittee has asked Derwent to have a representative familiar with the Derwent products available in the U.S. to answer questions that come up. Derwent has been assigning such people here on a rotating basis.

The Subcommittee has asked Derwent to make available the indexing of its patent collection since this information could enable users of the files to improve their searching performance. Derwent agreed if the cost of filming the indexing records could be recovered.

The Subcommittee has been represented at several of Derwent's meetings and planning sessions to present the TIRC's views, and Derwent representatives have appeared at meetings of the TIRC to discuss some of their proposals. With the encouragement of the TIRC, Derwent put its file on-line and the TIRC assisted in the initial testing of the on-line file. After the file had been in use for a short time, it conducted a survey among its members on their experiences with it and provided feedback to Derwent that helped get it over some of the rough spots.

As a result of meetings with the ad hoc committee in 1971, IFI improved the Uniterm file. It was designed from its inception in 1955 for use in machine-readable form and was searchable on computers for a number of years. In 1972, IFI merged the Uniterm file with a file which had been developed by du Pont and used by du Pont for a number of years. The new file covering the period 1950–1972 was enriched in several areas over the Uniterm file. It had a much larger chemical vocabulary: about 10 000 compounds, roles for the chemical compounds, a fragmentation system for indexing classes of compounds and compounds not in the chemical compound list, a system for indexing polymers, and a thesaurus for general terms. A new program was written for searching the file. The expense of merging the files and the new program were shared by subscribers who purchased copies of the new file. The cost of indexing new patents going in the file was greater and the cost of an annual subscription to the file went up. Unfortunately, the changes did not attract many new subscribers. This was of concern not only to IFI, but to the TIRC. To try to find out why the situation developed, the IFI Subcommittee, in cooperation with IFI, prepared a general questionnaire on the IFI services and circulated it to all members of the TIRC. Twenty-three replies were received (a good percentage return for surveys of this type), and the reason given most often for not buying the file was the annual purchase cost. Unfortunately, there is no way to get the cost of a subscription down without getting more subscribers.

Some people in the information field prefer to limit their use of machine-readable files to those available on-line, and to fill this need the TIRC encouraged IFI, several years ago, to make its files available on-line. IFI has satisfied this request by providing CLAIMS/CHEM and CLAIMS/GEM.

The IFI Subcommittee has been concerned with in-house computer costs for use of the IFI file. It prepared test questions which were run by a number of customers to get data on these costs.

After the new IFI file had been in use for a few years, the Subcommittee contacted IFI customers to get the benefit of their experiences with the file. Useful suggestions were received and passed on to IFI.

The Subcommittee cooperated with IFI in surveying potential users of a proposed index of foreign patents which would be compatible with the IFI index. The survey showed not enough interest to warrant the service, again primarily because of cost. IFI contacted the TIRC on the need for a timely assignee index to U.S. patents and found enough interest to publish the index on a quarterly basis. IFI has discussed other proposals, such as INPADOC with the TIRC.

The TIRC is available to hear from anyone with a reasonable proposal in the information field and has invited people with such proposals to discuss them at TIRC meetings to get

a reaction from industry. This has been helpful to the industry in getting new services.

The TIRC has supplied expertise available within the industry to vendors when requested for specific projects. It hopes to be able to do so in the future.

In addition to its patent activities, the TIRC has been involved in other projects mainly of interest to its On-line Subcommittee and Hazardous Chemicals Subcommittee. These Subcommittees, like the Chemical Abstracts Subcommittee, operate in fields broader than the patent field. They have made and are making contributions which will be useful to patent retrieval also.

The Committee is pursuing the purpose for which it was established, namely to analyze services offered by suppliers of technical information and to suggest improvements, to encourage research and development in the area of information retrieval, and to act as a forum for interchange of information retrieval with similar groups in this country and abroad. It has reported to the Board of Directors on the needs of the chemical industry in technical information retrieval and has emphasized the problems involved in trying to introduce new information services to industry. In his report to the MCA Board of Directors on October 8, 1974, Dr. R. H. Blaker said:

"Generally, technical information facilities in most companies are so decentralized that there is rarely one individual or a group who can speak for the entire corporation. Our Committee has conducted a survey and determined, among other things, that the average company represented on our Committee spends on the general order of 0.10 percent of sales on salaries and services represented in corporate information-retrieval facilities, libraries, special information services, etc. This probably means that in aggregate the chemical industry spends in excess of $50 million on corporate information-retrieval facilities. Our questionnaire also shows that the people involved in this work have usually administratively reported to various divisions or administrative site managers or service managers scattered throughout the corporation, and there is rarely any small group or individual who can speak for the corporation as a whole. This leads, we believe, to a situation where a large information retrieval service which requires back-up use of computers and trained analysts is usually too expensive a project to be seriously considered by the corporate representative contacted by the vendor of such a service. Usually, it appears, there is no mechanism within most companies for librarians, heads of information services in research or in legal departments or whatever, to get together and decide what is best for the corporation—or no mechanism to figure out how to share the cost of a large service, once purchased, through the various groups which might be interested within the corporation. The net result is that the vendor finds it difficult to sell enough copies of this product in order to make money, and, consequently, if this situation maintains, vendors will not in the future seriously consider developing significant information services for sale.

"There may be no easy solution to this problem, but I believe the matter seriously merits your consideration. It certainly follows that if vendors of significant information services are unable to make sufficient money to stay in business by selling subscriptions to their services to a reasonable number of chemical companies, the chemical industry will end up the loser. It will be deprived of improvements of information retrieval techniques which could in this way be acquired at reasonable prices but which would be prohibitively expensive for each of the companies to develop individually, or, for that matter, for MCA as a trade association to undertake the development."

Patent Intelligence and Technology—Gleaning Pseudoproprietary Information from Publicly Available Data†

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A new approach for gleaning useful correlative and statistical information from the patent literature is described. Common computer techniques are used to determine the level of U.S. patent activity by the 125 companies receiving the greatest number of U.S. patents in 1976. Analyses are reported on patent ownership, profiles of patent activity, patents granted vs. research budgets, pseudoproprietary information, and other useful intelligence.

Over the years many papers have been presented on ways for searching patents. The search systems reported comprise a variety of modifications on the traditional arrangements, such as subject matter indexes, classification files, concept coordination databases, and assignee listings. For the most part, authors have related these to the needs of research scientists and patent attorneys. In this paper, our intent is to focus attention on the intelligence aspects of patents. Emphasis will be on the possibility of analyzing, as well as forecasting the technological activities of major corporations. The results of these analyses will be of particular value to marketing managers and research strategists.

With the publication of The IFI Assignee Index to U.S. Patents in 1975, we became aware of the possibility of using this type of data to develop information not normally extracted from patent literature. The IFI Assignee Index to U.S. Patents contains references to all patents, reissued patents, and defensive publications that issue during a calendar year. The index is arranged alphabetically by assignee name. The patents under each assignee are arranged by U.S. Patent Office

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