Marketing
Information
Products and Services

A Primer for Librarians and Information Professionals

Editors
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Recognizing the importance of information in the process of development, Canada's International Development Research Centre (IDRC) has over the years supported a large number of projects aimed at developing information systems and services in support of research and development activities. An important objective related to the development of such projects was to ensure that the systems and services developed could be sustained over the long term. A crucial element in the sustainability of information systems and services is effective marketing. It presents avenues to generate revenue and reduce the financial constraints that many information services are facing in developing countries. This has long been recognized by IDRC, and the development of marketing plans has been introduced in several information projects to study how this could be achieved.

A literature review conducted in 1993 revealed that marketing of information was a relatively new issue in developing countries and that most of the literature on the subject originates in the North. The review concluded that marketing potential is underestimated by libraries and information services and that information professionals were generally reluctant to embrace the marketing concept. Information professionals need a better understanding of marketing concepts and approaches to be able to introduce them into their services and to recover the costs of the information services and products that they provide.

In this framework, leaders of a number of IDRC-supported information projects were brought together with a team of specialists in marketing of information at a meeting held at the Indian Institute of Management in Ahmedabad (IIMA), India, in February 1994. The discussion at this meeting focussed on how institutions in developing countries could be assisted in evolving relevant
marketing strategies. The meeting recommended the preparation of marketing guidelines and case studies that would help information specialists to design proper marketing strategies and marketing plans. Participants at the meeting prepared an outline for a manual that would respond to this need, and IIMA indicated its interest in coordinating the arduous work of compiling the manuscript. In October 1994, IDRC agreed to finance the activity.

This book is the result of IIMA's work. IDRC hopes that the guidelines and approaches proposed to introduce marketing activities within information services and systems will assist information professionals in developing countries with the development of sound marketing strategies. IDRC is proud to have contributed to this work—a collaborative effort of several information and development specialists from around the world.

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The information era is here. Even at the beginning of the last decade, John Naisbitt in *Megatrends* (1982) indicated that over 60 per cent of the people worked with information. He pointed out that between six and seven thousand scientific articles were being written each day, scientific and technical information was increasing by 13 per cent per year, and the rate would soon jump to perhaps 40 per cent per year.

On one hand, computers and networking have tremendously enhanced information storage, retrieval and dissemination capabilities. However, the new facilities require significant investments, which many libraries and information centres, particularly in the developing world, cannot afford.

On the other hand, economic reforms, globalization and privatization trends in the developing world lay emphasis on private enterprise and competitiveness. Consequently, government funding of libraries and information centres has been declining, and librarians and information managers have been forced to generate revenues not only for acquiring state-of-the-art facilities but also for their own survival.

Information is power, and more so in a competitive environment. Businesses, governments and individuals are collecting and storing more data than any previous generation in history (Alvin Toffler, *Powershift*, 1990). Moreover, information is being recognized as a critical resource for socio-economic development. As a result, libraries and information centres have an opportunity to tap.

This marketing guide, therefore, introduces librarians and information professionals to marketing concepts and approaches, helps them to adopt a marketing orientation, and provides them
with a step-by-step approach to developing marketing strategies and plans for their libraries or information centres.

The guide contains nine chapters and two cases studies.

- **Chapter 1:** Prof. Sreenivas Rao highlights the need for adopting a marketing approach by librarians and information managers.

- **Chapter 2:** Drawing upon an earlier research on assessment of needs of management information, Prof. Jain and Prof. Rama Rao explain concepts of marketing management and how they are useful and relevant to libraries and information centres.

- **Chapter 3:** Ms. Gumbs describes the marketing plan developed by the Technology Information Centre at the Argus Institute of Technology and, through this example provides guidelines for developing a marketing plan.

- **Chapter 4:** Prof. Koshy explains the meaning of products and services in the context of libraries and information centres, and provides guidelines for planning a portfolio of products and services.

- **Chapter 5:** Mr Vespry, Ms. Vespry and Ms. Avery discuss price—one of the four important marketing decisions. With the example of National Information Centre on Management (NICMAN) at IIMA, they explain the various considerations in taking pricing decisions.

- **Chapter 6:** Prof. Sreenivas Rao discusses another of the four marketing decisions, promotion, with examples of various libraries and information centres, such as INSDOC, ICRISAT, and CEIS; and provides guidelines for making promotion decisions.

- **Chapter 7:** Prof. Koshy deals with the rationale, procedure and steps of conceiving, designing and introducing new information products and services.

- **Chapter 8:** Mr. Chin and Prof. Jain discuss the what, why, and how of marketing research along with brief descrip-
tions, illustrations, and guidelines for planning and executing selected marketing research designs.

■ **Chapter 9**: Dominique Beaulieu describes how the Centre de recherche industrielle du Québec switched from free service to charged service and brought about changes in the outlook, attitude and structure of the organization to achieve a marketing orientation.

Towards the end of the guide, two case studies have been included.

■ (A) "**Caribbean Energy Information System**" by Ms. Whyte and Prof. Sreenivas Rao and

■ (B) "**Asian CD-ROM on Health and Environment**" by Mr. Chin and Prof. Jain.

CEIS was set up to enhance the capabilities of the Caribbean countries in energy information collection, storage and utilization for optimum conservation and utilization of the region's energy resources. The other case presents the market research conducted for assessing suitability and utility of CD-ROM publishing, a modern information technology, and the process of developing suitable marketing plans for the same in developing countries.

This guide can be used as

- a *text* to understand marketing concepts, tools and techniques relevant to a library/information centre,
- a *reference book* to draw up marketing strategies and plans, and
- a *training manual* in educational and training programmes for librarians and information managers.

**Editors**
Acknowledgements

This guide is an outcome of a workshop held at the Indian Institute of Management, Ahmedabad in February 1994, where project leaders of the International Development Research Centre, Canada, expressed the need for a marketing manual for librarians and information professionals. IDRC entrusted the job to the Indian Institute of Management, Ahmedabad. Mr. Renald Lafond, Senior Programme Officer, IDRC, gave us valuable guidance through-out the project. We are very grateful to him and to IDRC.

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Many more have directly or indirectly contributed to this work. We are grateful to all.

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MARKETING RESEARCH FOR ASIAN CD-ROM ON HEALTH AND ENVIRONMENT

Chin Saik Yoon and Abhinandan K. Jain
In early 1992, Miss Lee, the information specialist (managing information projects) in the South East and East Asian Regional Office of the International Development Research Centre (IDRC), reviewed two proposals for conducting a market study for the proposed Asian Environmental Health CD-ROM (See Appendices 1.1 and 1.2). This review would help IDRC in deciding which agency should undertake the study.

INFORMATION ENVIRONMENT

By the late 1970s, managers and researchers of development programmes had come to appreciate information as a strategic...
resource. They found that, appropriate and timely information provided the key to numerous critical questions confronting those who were working for improving the socio-economic conditions of developing countries. A number of international development agencies responded to this need by funding numerous information resource centres in universities and research institutes. These centres were usually managed by documentalists and librarians, in consultation with subject matter specialists. Since the centres were established to support specific programmes their content/coverage tended to be tightly focused.

Each of the centres, typically, had a comprehensive collection of documents and publications relating to a particular subject. These included published items such as journals, books, statistics, directories and manuals, and unpublished materials (sometimes also known as 'grey' or 'fugitive' materials) such as conference papers, research reports, theses, policy papers, etc. The materials were organized and tracked through professional library systems involving indexes, catalogue entries, abstracts and bibliographies. When affordable mini and micro-computers became available, many of these centres converted their manual indexing, cataloguing and abstracting operations to automated ones. Because fugitive materials were difficult to find in developing countries, the information centres were encouraged to pay more attention to their collection and documentation.

In most cases, the number of clients who made use of these centres was limited. The core users tended to be researchers and practitioners, based at the same locations as the centres. Other interested users were often unable to make good use of the services offered by these centres, owing to the vast distances separating them and the centres. Number of users were also limited because of the tight subject focus of each centre. For a good number of years, the centres provided invaluable support to researchers and practitioners.

Sometime in the 1980s, the philosophy of development research shifted away from highly specialized methods to multidisciplinary and interdisciplinary approaches. Researchers
suddenly found that their tightly focused information centres were unable to provide, on their own, the wide range of information needed to carry out inter and multidisciplinary research. At about the same time, new information technologies, capable of moving vast amount of data, cheaply and efficiently, from information sources to users, became available, much of it made possible by the computerization and digitization of information. Examples of these technologies include on-line information services, computer diskettes and CD-ROMs. The geographical isolation of information centres was quickly overcome, and information could be speedily delivered to the users. In recent years, the widespread reach of the Internet network, allowed users to roam the world, sampling and accessing information from hundreds of thousands of information sources. The information revolution had finally conquered the world and set information seekers free.

IDRC: SOUTH-EAST AND EAST ASIAN OFFICE

IDRC had invested substantially, in assisting well established institutions in the Asia-Pacific region to build and strengthen national, regional or international information and resource centres, databases and databanks. Many of these information centres were now mature. The host/parent institutions had continued to maintain the initial operations and facilities.

In late 1991–92, Miss Lee saw the potential of tapping these new technologies to add value to the centre’s past investments as well as those of national governments and other donors. She visualized the strategic importance of the project for the South East and East Asian Regional Office, by making inroads into countries that had suffered loss of information resources because of wars. These countries were highly disadvantaged in keeping pace with the rest of the world, as they tried to compete in free markets. She visualized the following major gains of pursuing this opportunity:
Improved access for developing countries to relevant information systems, services and networks that will remain effective and sustainable when IDRC support ends.

Demonstrate a successful developing country application of modern information technology—CD-ROM publishing—through local testing, adaptation and implementation.

Increase collaboration among developing country partners, donors and development institutions.

**CHOICE OF TECHNOLOGY**

Present forms of accessing and disseminating information resources in the developing countries, tended to discourage usage. Print indexes made searches slow, cumbersome and difficult for correlate multiple search terms. At the same time, distribution was costly and often delayed for many months, if sent by surface mail. Print media was bulky and required storage space as well as tedious catalogues for identifying and locating information. Direct access to external databases in the West, through packet switching, was too expensive and often limited by under-developed telecommunications systems in the South. It also did not solve the problem of access to important Asian information resources that were available in the region. Dissemination and exchange of diskettes were not expedient, because of the large number of diskettes that needed to be sent and exchanged, given the normal database volume and updating regimes.

The advantage of CD-ROM was that it could hold voluminous amounts of data. Up to 630 MB (Megabyte) of data could be stored on a single disk; a standard 5 1/4 inch floppy disk holds only 1.2 MB. Accessing information from a CD-ROM had become an irresistible option because it offered the excitement of multimedia, huge storage at a relatively low price and searches at any time and any place without the need to incur telecommunication costs. But, depressingly enough, the present proliferation of serial titles, monographs, etc. on CD-ROM was
coming out only from the West. While industry in Asia had started approaching institutions, libraries and documentation centres to provide information resources on CD-ROM, the capability to self-premaster CD-ROM was limited.

There was no doubt that the capacity to make use of the CD-ROM publishing technology, and to access information in CD-ROM formats, needed to be strongly encouraged in the developing countries. This was necessary, if they were not to be left behind the fast pace that industry was setting for the information sector in the world. Industry projected more and more users getting into multimedia and electronic publishing. High quality colour graphics, stereo sound, full motion/video clips, animation and texts available on CD-ROMs were especially advantageous for encouraging information use. Some of the most exciting softwares for personal computers were being published on compact disks instead of floppy disks. Asian industry also saw a lucrative market in CD-ROM drives and was expanding into making them, each targeting at a million or so units of sales per annum. The price of a CD-ROM drive had dropped as low as 300 Canadian dollars (CAD). The number of CD-ROM applications was growing exponentially. Users worldwide were snapping up CD-ROM drives as fast as manufacturers could make them. However, the growth in Asian developing countries was not as promising.

DEVELOPMENTS SO FAR

In 1992, keeping in mind the changing scenario, Miss Lee decided to harness the potential of these new technologies and broaden the reach of the information centres which IDRC had been instrumental in establishing. After consulting with a cross-section of experts in the development field, she opted to explore the feasibility of producing a CD-ROM having as its theme, ‘ASIA/HEALTH/ENVIRONMENT’. In reviewing the portfolio of information projects which IDRC had been associated with, she discovered that this broad thematic area was not adequately
covered by the IDRC funded projects alone. She identified a number of other established information centres, which had the potential of making significant contributions towards the CD-ROM, and approached them to explore the idea jointly. Most accepted the invitation.

A technical study was next commissioned to determine if the data available were suitable for mounting on to a CD-ROM. The study reviewed at the same time, local capacity for processing the various contributions of information into a form, suitable for inclusion on the proposed disk. The study was undertaken by the Canadian Centre for Occupational Health and Safety (CCOHS), a leading CD-ROM publisher. The Director General of CCOHS was exceptionally well placed to undertake the study, as he had worked extensively in developing countries and routinely undertook projects, which involved the type of syndication of different institutions, which the project was attempting to set up. The findings were positive. The data were found to be suitable for the CD-ROM format, and highly competent personnel existed locally to assist in data processing and preparation.

After a thorough review of available databases in Asia, six databases were tentatively identified for inclusion in the CD-ROM, as they fitted the scope of the topic. These were drawn from specialized and leading national institutions, in specific fields, in different countries of Asia. The information contents of the databases and the institutions housing them were as follows:

A: Natural Toxins and Venoms, National University, Country A
B: Environmental Sanitation, Asian Institute, Country B
C: Water Borne Diseases, International Research Centre, Country C
D: Traditional Medicines, Traditional Medicinal Research Centre, Country D
E: Aromatic and Medicinal Plants, National Research Centres, Countries E and F

Miss Lee presented the idea to her peers for consideration, as an activity which should be supported. She suggested that the proposed grant be used as seed money to launch the enterprise
Selection of a Research Agency

which should be eventually, self-financing. The committee which heard the proposal, accepted it in principle but requested more proof, that the project had real potential of generating sufficient revenue to fund itself, once IDRC funding ceased. A market study for the CD-ROM was decided upon. Two groups of consultants were considered for the study: the first was a highly respected group of consultants which had undertaken studies which had led to the launch of very successful products. The second was Southbound, a young company based in Penang (Malaysia), dedicated to working on development issues with the NGO sector. The company had just completed a market study of a South Asian information network. (The proposal by Southbound is given in Appendix 1.1 and that by the Singaporean consultants group in Appendix 1.2.)

Proposals of both the groups were reviewed. The proposed budget of Southbound was significantly lower. However, besides considering the budget, Miss Lee was keen on selecting one which would deliver the results and put the venture on the road to success.

QUESTIONs FOR DISCUSSION

1. Please assess the two proposals for suitability of the proposed project.
2. Please think through the criteria you would like to use for making a choice between the proposals submitted by the research and consulting agencies.
3. Recommend the proposal you think is better for acceptance. Please justify your recommendation.
4. As Miss Lee, please think through a plan of action to work with the selected agency, to conduct the market study.
Market Study for the Proposed Asian Environmental Health CD-ROM: Proposal by Southbound

RATIONALE

Southbound described IDRC's role in promoting research, development and use of information services, systems, networks, tools and technologies to catalyse its work of accelerating the development process. It also described the capabilities of CD-ROM and explored its usefulness for achieving the objectives outlined in the text of the case. (These are omitted for the sake of keeping the description brief.)

OBJECTIVES

The overall goal of the market study is to determine the feasibility of producing a CD-ROM containing Asian Health and Environment related data for sale within the region, its primary market; and the rest of the world, its secondary market. It will also consider the possibilities of setting up a consortium of database owners, who will jointly develop the product and collectively undertake its marketing. Limited resources for promotions and management of sales may thus be pooled. An effective cooperative marketing arrangement will contribute towards the sustainability of the participating databases. Specific objectives of the study include the following:

- Identification of market niches for Asian data and information contained in the selected databases.
Pre-testing the prototype CD-ROM for the main purpose of obtaining user specifications for the proposed product.

Collection of information which will allow IDRC to determine or forecast:
- The size of the potential market (how many users have or plan to acquire the hardware needed to use the CD-ROM), its characteristics and preferences.
- The presence of other important, relevant databases that need to be considered for inclusion in the final CD-ROM.
- The most appropriate channels to deploy in promoting and making available the product to end-users.
- The price of the CD-ROM.
- The number of disks to be pressed in its initial manufacture.
- The revenue to be generated by sales.

METHODS

The study will be guided throughout by market-driven strategies.¹ Instead of focusing only on user reactions to the prototype, the emphasis here will be on using the prototype to trigger and probe potential subscribers into thinking about the most useful and attractive information product. The assumption here is that the prototype is not the final product and, perhaps, may not even resemble the product to be eventually developed and launched into the market. Congruent to this approach will be the devotion of a larger part of the study to obtaining user specifications on the proposed CD. Given that the product remains to be fully conceptualized and launched, such an approach will allow users to feed forward descriptions of their needs for immediate processing into the development of the disk, and the selection of institutional partners, who bear the greatest potential of contributing to the success of this undertaking.

This study presents an excellent opportunity to operationalize several innovative market research techniques in a development setting.

The first and overriding method is backward market research\(^2\) which is increasingly used in the private sector to address weaknesses of classical approaches; the method promises to make research more useful and more directly focused on the decisions and actions management will need to take on the product; it should also avoid presenting management with research results that are not action-oriented or tell them what they already know. In backward research, the researchers begin by establishing the ways in which the research results will be implemented. This usually involves a detailed and careful mock-up of a dummy report in close collaboration with the clients, so as to determine the critical elements to be included in the actual report. Through this process, the objectives of the research become sharply focused, and an agreement is reached amongst the people commissioning the research and between them and the researchers, for the best direction to be followed in the study. The implementation of backward research, however, requires the management to take part in a detailed and careful analysis of decision alternatives. It also requires additional time of the researchers to prepare dummy research instruments, data and findings, to help determine how research results are expected to eventually affect management decisions.

IDENTIFICATION OF MARKET NICHES

This objective will be met through a self-administered mail survey. A questionnaire, already pre-tested with professionals and librarians in the business, will be posted to 500 general practitioners, medical specialists, other specialists, hospital administrators and health/medical librarians in and outside Asia. This sample will be identified with the help of research institutions and professional medical bodies and key informants in the region. A response rate of 20 per cent is anticipated. To encourage this response rate, a modest gift of medical publications, together with a special pre-publication offer of a special discount off the price list, both to be determined later, will be offered to people who return completed questionnaires.

The results of the survey will be used to conduct semi-structured in-depth interviews with ten experienced librarians, drawn from the leading medical libraries of the region. Apart from serving to clarify the
results of the survey, the interviews will also serve to reaffirm the information-seeking behaviour of doctors and specialists. Similar interviews will be repeated with leading vendors of information products who are willing to participate in the study.

**Presenting the Prototype CD-ROM**

Ten focus groups will be convened, at different locations in the region, at which the prototype CD will be presented. Each group will be formed of about eight medical professionals and librarians, representing a cross-section of the intended market for the product. Whenever possible, steps will be taken to involve only those people, who are not acquainted with each other in the groups, although this may not always be possible in developing country settings, where professionals belong to small and tightly knitted groups. The demonstration of the disk will be used to trigger discussions on:

- Product ideas represented on the disk.
- Specifications for a disk which will best serve the professional and economic interest of group members, including updating issues after the initial sale.
- The information seeking patterns of members and of their peer groups.

The prototype will also be presented to information product distributors. As their numbers are very small in any location, such presentations will be followed by semi-structured in-depth interviews rather than group discussions.

**COLLECTION OF INFORMATION ON PROMOTIONAL/DELIVERY CHANNELS, PRICE AND DEMAND**

This information will be gathered as a part of the activities already described, involving postal surveys, focus groups of medical personnel and in-depth interviews with medical librarians and commercial distributors. 'Desk research' including a review of literature, information gathering on related databases, and study visits to various resource/information centres that are already producing or planning to produce and market CD-ROMs, will also be carried out.
PRODUCT OF THE STUDY

Study Report
The main product of the study will be a report containing a set of detailed user specifications for the proposed disk. These should include details on content, format, and search and retrieval features. The specifications should allow IDRC and its partners to identify the market niche and the most advantageous position for the CD. The second part of the report will contain analysis and recommendations on a pricing policy, promotional strategies and distribution mechanisms. If there should still be a lack of knowledge, and if additional information is available at the time of the preparation of the report, further observations, comments and recommendations, if any, will be included in the business arrangements of the consortium of owners of the product, as well as in its management and operations, in the long term.

Mailing List of Potential Customers
This list will be built in the course of the researchers' work, travel and interactions with the people coming into contact with the study. The list is anticipated to contain at least a few hundred names and addresses of potential purchasers of the CD-ROM, working within and outside Asia. The list will be provided in the form of a paper print-out and as a FastPak Mail (Version 5.0) database which can be used instantly by the consortium to generate direct mail promotional materials. It will have mail-merge, labelling and sorting facilities usually required in implementing direct mail campaigns.

Collection of Promotional Materials Used by Other Producers
Direct mail materials and promotional aids employed by CD-ROM producers with good track records, will be collected as a resource and reference tool for the later design and distribution of materials to be used in the promotion of the CD-ROM.
To maximize the utilization of its project results, IDRC plans to facilitate direct access to the databases, compiled under the various projects sponsored by the Centre. A most recent information storage and retrieval instrument is the CD-ROM. Hence, it is proposed that a CD-ROM marketing study be undertaken, to determine its efficiency and cost-effectiveness in disseminating IDRC's databases.

**OBJECTIVE OF THE STUDY**

The proposed study will ascertain the economic viability of a CD-ROM information dissemination system for IDRC's databases. It will also develop an administrative/organizational system for its sustainability in the long run.

**METHODOLOGY**

The study will comprise the following stages:

1. *Sample survey of users for the selected databases*
   
   Based on the type of data/information in the databases, the database researchers' opinions and public information systems (e.g. directory of medical libraries), a list of potential users will be compiled.
Assessment of potential users' intention to acquire the CD-ROM on the databases will be obtained from a mail survey of a sample of 100 potential users.

The questionnaire will attempt to determine, inter alia:

- Similar existing data
- Desire to acquire proposed data.
- Desire to acquire other data available from IDRC projects.
- Existing system for CD-ROM (including type of software).

The survey findings should provide information for estimating the size and type of demand for IDRC CD-ROM databases.

2. *Pilot test of IDRC CD-ROM prototype*

If the survey confirms an adequate demand for the selected IDRC databases, a prototype of the proposed IDRC CD-ROM will be produced and tested in a sample market (for instance, two major institutions in each of eight selected country markets).

3. *Financial analysis on production of IDRC CD-ROM*

An analysis will be done to determine the following:

- Unit production cost.
- Unit price (including differential pricing).
- Ownership of copyrights.
- Royalty payments to database researchers.
- Administrative system.
- Technical support.
- Updating schedule.

4. *Marketing strategy for IDRC CD-ROM*

A marketing strategy will be designed to cover:

- Type of promotion and advertising activities to capture a larger market.
- Strategic positioning of the product.
- Type of distribution channels.
- Type of mechanism for user feedback and subsequent follow-up action.
- Assessment of effectiveness of promotional activities.

**DURATION**

The project will require at least 18 months. A tentative schedule is as follows:
1. Mail survey on 100 potential users 2.5 months
2. Pilot test of prototype 5.5 months
3. Financial analysis 4.0 months
4. Marketing strategy 6.0 months

BUDGET

The total cost is estimated at CD 1,69,100.

The major components included were all the items listed under the sub-heading 'Methodology'. Each item had cost budgets (at particular rates) for researcher's fee (CD7000 per month), research assistance (CD2,500 per month), clerical assistance (CD700 per month), stationery and communication, transportation and administrative costs. Transport, communication and administrative costs were about 15 per cent of the total budget (The details have been omitted).

RESEARCHERS

The project will be undertaken by:

(Details have been omitted here. The team consisted of three researchers. One of them was managing director of a management consulting organization. The others were senior faculty members at a leading management school, in a country in South East Asia.)
Finalizing Research Plan

In early 1993, Miss Lee was reviewing the detailed research plan submitted by Southbound, for studying the market for an Asian CD-ROM on health and environment. The purpose of the review was to make sure that the information obtained from the study was adequate to achieve the objectives, for which the research was being conducted.

BACKGROUND

In 1992, Miss Lee saw the potential of tapping new technologies to broaden the reach of the information centres which IDRC had been instrumental in establishing. After consulting with a cross-
section of experts in the development field, she opted to explore the feasibility of producing a CD-ROM having as its theme, 'ASIA/HEALTH/ENVIRONMENT'. In reviewing the portfolio of information projects which IDRC had been associated with, she discovered that this broad thematic area was not adequately covered by the IDRC funded projects alone. She identified a number of other established information centres, which had the potential of making significant contributions towards the CD-ROM, and approached them to explore the idea jointly. Most accepted the invitation.

A technical study was then commissioned to determine if the data available were suitable for mounting on to a CD-ROM. The study reviewed at the same time, local capacity for processing the various contributions of information into a form, suitable for inclusion on the proposed disk. The study was undertaken by the Canadian Centre, for Occupational Health and Safety (CCOHS), a leading CD-ROM publisher in Canada. The Director General of CCOHS was exceptionally well-placed to undertake the study, as he had worked extensively in developing countries and routinely undertook projects, which involved the type of syndication of different institutions, which the project was attempting to set up. The technical study was carried out in four locations: India, Thailand, China and Singapore. The findings were positive. The data were found to be suitable for the CD-ROM format, and highly competent personnel existed locally to assist in data processing and preparation.

After a thorough review of available databases in Asia, six databases were tentatively identified for inclusion in the CD-ROM, as they fitted the scope of the topic. These were drawn from specialized and leading national institutions, in specific fields, in different countries of Asia. The information contents of the databases and the institutions housing them were as follows:

A: Natural Toxins and Venoms, National University, Country A.
B: Environmental Sanitation, Asian Institute, Country B.
C: Water Borne Diseases, International Research Centre, Country C.
D: Traditional Medicines, Traditional Medicinal Research Centre, Country D.
E: Aromatic and Medicinal Plants, National Research Centres, Countries E and F.

The rationale for choosing the broad theme of health and environment, and the six specific subject areas, were mentioned by Ms. Lee in her communication to the case writers:

The theme was one of IDRC's programme focuses. We had been associated with most of the databases as they were IDRC projects. Before IDRC funds a project, the need would have been established first. We wanted to enhance the value/utilization of these databases into which we had made much investment. We knew of other important datasets in the region that fall within the subject scope. They form the largest single collection of data resources, that we knew of, that were allied and could logically become a family of CD-ROMs. The owners of these databases were willing to participate because they were familiar with IDRC's role.

RESEARCH BRIEF/OBJECTIVE

The appointment of Southbound as market researcher was formalized through a contract signed with IDRC. The contract described and defined the research brief in the following manner:

Purpose of the Grant

This allocation will enable Southbound to undertake a market study, to determine the feasibility and sustainability of producing a CD-ROM, containing Asian related data for sale within the region and the rest of the world. The nature and methodology of the study is detailed in Appendix 1.1 (Part I) of the case.

The specific objectives of the study include the following:

- Identification of market niches for Asian data and information contained in the selected databases.
- Pre-testing the prototype CD-ROM for the main purpose of obtaining user specifications for the proposed product.
Collection of information which will allow the Centre to determine or forecast.

The size of the potential market (how many users have or plan to acquire the hardware needed to use the CD-ROM), its characteristics and preferences.

The presence of other important, relevant databases that need to be considered for inclusion in the final CD-ROM.

The most appropriate channels to deploy in promoting and making available the product to end-users.

The price of the CD-ROM.

The number of disks to be pressed in its initial manufacture.

The revenue to be generated by sales.

The words '... and the rest of the world' in the opening paragraph of the brief were accepted by the researchers with much reservation. It was inserted at the specific request of IDRC. The researchers felt that, given the limited resources available for the study, attempting a global survey was unrealistic and overly ambitious. IDRC's insistence was based on its hunch that the CD-ROM would sell outside Asia, and that the disk would probably make most of its profits in Europe and North America, where it could be marketed at the full international price—the thoughts had already emerged at this point for discriminatory pricing, where developing countries would be charged a lower price for products than other subscribers. (The proposal of Southbound is given in Appendix I.1 (Part I) of the case.)

METHODS

The market study was guided by market-driven approaches. The researchers first aimed at determining user applications and benefits, and only then the attributes of a product. Congruent with these approaches, the study devoted one half of its efforts towards stimulating and gathering information on user-needs and product/format preferences. The other half was spent on pre-testing the very effective prototype CD-ROM.
RESEARCH DESIGN

The study presented an opportunity for the researchers to operationalize innovative market research techniques in a development setting. The first, overarching method was backward market research. It was used in finalizing the design of the study. By beginning at the point where research ends—i.e., the use of the research results by managers—the method strives to make research more useful and directly focused on supporting the decision-making processes of management.

In actualizing this first step of the study, the researchers prepared a mock-up of the executive summary of the proposed study and presented it to the staff in IDRC's regional office. Accompanying the presentation were survey instruments, interview schedules and key questions for focus groups. The presentation was followed by an in-depth critique of the mock research report and the instruments proposed. The feedback was used to finalize the design of the study.

LITERATURE REVIEW

Much of the information used in preparing the dummy research results were obtained through a review of selected published and unpublished papers on CD-ROM design, production and marketing. The literature review helped lay the base from which this study was planned, implemented and concluded. (A short list of some of the references used is included at the end of this case study.)

The literature review led to the following conclusions:

- The professional CD-ROM market is just emerging from its gestation stage.
- The number of specialist titles is increasing at a geometrical rate.
There is no title in the broad thematic area of the proposed theme.

CD-ROMs containing specialist information tend to be purchased by institutions rather than individuals.

Users must be closely involved in developing a CD-ROM if the product is to sell.

Past CD-ROMs which have sold well did so not only because of the quality of the information they contained, but also because of the superior search and retrieval software which came with the disks.

There is a definite trend for including still and moving images, and sound in CD-ROMs to make such multimedia disks more attractive to users.

The hardware required to run multimedia CD-ROMs is expensive and may become a standard feature of the next generation of personal computers.

Although many CD-ROMs are created on the Apple-Macintosh platform, most users own IBM compatible systems. The PC platform, therefore, promises the dominant share of the market.

Prices of most CD-ROMs are on the decline.

**POSTAL SURVEY**

The first half of the study was implemented through a postal survey of potential end-users and buyers of the CD-ROM.

The original plan to survey only Asians was expanded to cover the whole world at the request of IDRC. This was an appropriate change in view of the intentions to market the disk globally. The North American and European markets were particularly important as they possessed the purchasing power to buy the CD at international prices and, therefore, had the potential to contribute significant profits to the enterprise.

*The Sample* Twelve countries were selected for the postal survey. In selecting the countries, the researchers used the latest
published list which rank ordered the majority of nation states in the world according to their respective GNP per capita (Appendix II.1.). The countries in the list were grouped into four GNP categories. From each of the groups, three countries were randomly selected. Other criteria guiding the selection included the level of fluency in English (the language used in the survey), and the manageability of the total user population size. The countries selected were as follows:

<table>
<thead>
<tr>
<th>Group I</th>
<th>Group II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switzerland</td>
<td>Hong Kong</td>
</tr>
<tr>
<td>United States of America</td>
<td>Singapore</td>
</tr>
<tr>
<td>Australia</td>
<td>Saudi Arabia</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group III</th>
<th>Group IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>Philippines</td>
</tr>
<tr>
<td>Malaysia</td>
<td>India</td>
</tr>
<tr>
<td>Thailand</td>
<td>Bangladesh</td>
</tr>
</tbody>
</table>

THE MAILING LIST

Within each of the 12 countries, the names of those working in the fields covered by the prototype CD-ROM were selected from The World of Learning 1991 and compiled into a mailing list. As with most surveys, the list compiled and deployed was limited. It lacked, primarily, names of potential users in the private sector, particularly the pharmaceutical industries. This weakness was considered and accepted in view of the absence of a superior mailing list. The list was, however, very thorough in its coverage of all the major medical libraries and institutions of higher learning and research.
THE QUESTIONNAIRE

The questionnaire, together with an accompanying letter introducing the study, are given in Appendix II.2. Apart from being subjected to criticism during the presentation of the mock study results at IDRC, Singapore, the questionnaire was pre-tested on a network of hospitals serving a medium-sized city, at a university covering medical, pharmaceutical and environmental sciences, and finally at a network of local and international NGOs working on issues of health, environment and toxics. The hospitals belonged to the Department of Health, City of Ipoh, a city in one of the selected countries. The university and the NGOs were also from the same country.

The draft questionnaire was also sent to all the database owners for their comments and for local pre-testing in six Asian countries.

Information specialists at the IDRC headquarter and the Regional Office reviewed the draft instrument and made many suggestions for its improvement.

DATA COLLECTION

The researchers mailed 1,894 questionnaires (1,533 addresses from the World of Learning and 341 from TROPMED) from Penang, Malaysia. Thirty questionnaires accompanied by covering letters, were couriered to each database owner to be distributed to their contacts. This was done because earlier attempts to obtain clients' lists from the owners had succeeded in getting only two lists. A survey of the owners' current clients was necessary as it was the intention of the researchers to study the potential of cross-selling (where one group of subscribers is targeted with promotional efforts for an allied, but different, product).

The covering letter explained the thrust of the study and offered two sets of incentives for the participants of the study:
The first 100 people to return the questionnaire would be given a selection of WHO publications (letters to the Malaysian list were mailed 7 days later than the rest to ensure that the Malaysians did not have an unfair advantage over addressees further afield).

All respondents returning the completed questionnaires would receive a discount voucher of US $20 to be 'cashed-in' on the purchase of the CD-ROM.

A reminder letter was sent to everyone on the mailing list, who had not returned the completed questionnaire, six weeks from the date of posting.

**FOCUS GROUP DISCUSSIONS**

The prototype CD-ROM, produced by CCOHS with data provided by the database owners, was to be demonstrated and discussed at 11 focus groups as shown in Table II.1.

<table>
<thead>
<tr>
<th>City</th>
<th>Researchers/Practitioners Participant Groups</th>
<th>Librarians Participant Groups</th>
<th>Total Focus Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manila</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>New Delhi</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Bangkok</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Singapore</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>4</td>
<td>11</td>
</tr>
</tbody>
</table>

The selection of participants for the focus groups was to be undertaken by the database owners, hosting each set of discussions. The four cities had potential users of the CD-ROM and represented regions in which the CD-ROM would be distributed. The four organizations were to make their selection of participants according to the criteria provided by the researchers. Special attempts were to be made to identify participants not known to each other, within each of the 11 groups. This was to address a frequent criticism of focus groups made up of acquaintances
and friends who did not provide frank reactions to issues under discussion.

The conduct of the focus groups was standardized for all the 11 groups in the four locations. The steps to be followed were as follows:

1. Welcome session.
2. Briefing participants on the objectives of the study.
4. Demonstration of the prototype.
5. Discussion of points contained in the schedule.

The prototype demonstration was to follow a standard routine. The bibliographic databases running on the CCFIND software were to be demonstrated first. The facilitator used key words in the demonstration which had been carefully selected and rehearsed beforehand. The words selected were always from the most current interest areas of the participants. They were also to be selected to present the most impressive search output, given that the prototype contained only samplings of the various databases. The next to be demonstrated were the full text databases running on CCPUB software. Search strategies were to be carefully selected and rehearsed as with CCFIND software.

Special attention was also devoted to demonstrating colour pictures and other graphics embedded in the disk. Other features demonstrated were hypertext links, bookmarks and various search strategies.

All the groups discussions, except the two in Singapore, were audio-taped.

CONSULTATION WITH DATABASE OWNERS

Selected database owners were to be consulted to clarify two important issues:

1. Facets of collaboration which would make it rewarding for individual institutions to be members of the consortium of owners on a sustained basis.
2. Existing sales of owners' publications and other information products which may be affected by the marketing of the CD-ROM.

INTERVIEWS WITH CD-ROM DISTRIBUTORS

Members of the trade dealing with CD-ROMs were invited to the demonstrations held at Manila, New Delhi, Bangkok and Singapore for their appraisals of the prototype.

QUESTIONS FOR DISCUSSION

1. Please study the specific details of the following studies in the proposed designs
   - Literature Survey
   - Postal Survey
   - Focus Group Discussions
   - Consultation/Interview with database owners and CD-ROM distributors
2. The achieving the objectives of specific studies:
   - Critique the sample, the data collection process, and the data collection instruments
   - Suggest suitable changes wherever needed.
3. Please assess the suitability of the overall design for obtaining the information required to take decisions.

REFERENCES


The countries used in the selection process:

<table>
<thead>
<tr>
<th>Country</th>
<th>GNP US$</th>
<th>Country</th>
<th>GNP US$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group I</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swizerland</td>
<td>35,100</td>
<td>Papua New Guinea</td>
<td>1,025</td>
</tr>
<tr>
<td>Japan</td>
<td>27,326</td>
<td>Philippines</td>
<td>835</td>
</tr>
<tr>
<td>USA</td>
<td>22,550</td>
<td>Egypt</td>
<td>730</td>
</tr>
<tr>
<td>Canada</td>
<td>21,500</td>
<td>Indonesia</td>
<td>645</td>
</tr>
<tr>
<td>Germany</td>
<td>21,475</td>
<td>Sri Lanka</td>
<td>550</td>
</tr>
<tr>
<td>France</td>
<td>21,188</td>
<td>Maldives</td>
<td>470</td>
</tr>
<tr>
<td>Italy</td>
<td>19,511</td>
<td>Bhutan</td>
<td>415</td>
</tr>
<tr>
<td>Britain</td>
<td>17,738</td>
<td>Pakistan</td>
<td>400</td>
</tr>
<tr>
<td>Brunei</td>
<td>17,500</td>
<td>China</td>
<td>360</td>
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<tr>
<td>Australia</td>
<td>16,310</td>
<td>Kenya</td>
<td>340</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nigeria</td>
<td>350</td>
</tr>
<tr>
<td></td>
<td></td>
<td>India</td>
<td>310</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Burma</td>
<td>250</td>
</tr>
<tr>
<td><strong>Group II</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hong Kong</td>
<td>15,750</td>
<td>Bangladesh</td>
<td>208</td>
</tr>
<tr>
<td>Singapore</td>
<td>15,030</td>
<td>Vietnam</td>
<td>200</td>
</tr>
<tr>
<td>New Zealand</td>
<td>11,875</td>
<td>Laos</td>
<td>185</td>
</tr>
<tr>
<td>Macau</td>
<td>11,300</td>
<td>Nepal</td>
<td>170</td>
</tr>
<tr>
<td>Taiwan</td>
<td>10,215</td>
<td>Afghanistan</td>
<td>150</td>
</tr>
<tr>
<td>South Korea</td>
<td>6,635</td>
<td>Cambodia</td>
<td>150</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>6,600</td>
<td>Mongolia</td>
<td>100</td>
</tr>
<tr>
<td><strong>Group III</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>3,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>2,970</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>2,965</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>2,200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiji</td>
<td>1,945</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>1,670</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>1,660</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix II.2

Asian CD-ROM

Southbound, 9 College Square, 10250 Penang, Malaysia.
Tel: 60-4-282 169, Fax: 60-4-379 280
April 3, 1993

Dear __________

Leading Asian and international research institutions are exploring the possibilities of producing a 'compact-disc-read-only-memory' (CD-ROM), to improve the accessibility of their unique databases containing information relating to various aspects. These institutions are:

A: National University, Country A.
B: Asian Institute, Country B.
C: International Research Centre, Country C.
D: Traditional Medicinal Research Centre, Country D.
E: National Research Centres, Countries E and F.

The consortium of institutions seeks your input into the design of the CD-ROM. We hope you will participate in this survey of some of the world's leading health specialists. The survey is aimed at identifying the information needs of experts and specialists working in the field so that we can fulfil them effectively.

Please take five minutes to complete the questionnaire enclosed and airmail it to me, in the envelope provided, by May 2, 1993. We would like to show our appreciation for your participation in the survey in the following ways:

- If your completed questionnaire is among the first 100 questionnaires received by us, we will buy and airmail to you a selection of World Health Organization publications in your fields of interest.
In addition to this, we will send you a **voucher for the value of Twenty United States Dollars** ($20.00USD) which you can 'cash-in' as a discount on your future purchase of the CD-ROM we are planning to produce, irrespective of whether you are among the first 100 respondents or not.

This survey is being funded by a research grant from the Agency for Development Research.

**CD-ROM** is a relatively new information delivery technology. It records data on a compact disc which is similar to the CDs used in the music recording industry. The CD-ROM is used on a disc drive connected to a personal computer. The computer enables quick, complex searches to be carried out on the CD-ROM—the information you are seeking will be found within seconds after the commencement of each search. Up to 250,000 A-4 sized pages of information can be stored on each disc.

Thank you very much for your time and contributions.

Yours sincerely,

Chin Saik Yoon

Researcher

(Contd)
Appendix II.2 (Contd)

Asian CD-ROM
Southbound, 9 College Square, 10250 Penang, Malaysia.
Tel: 60-4-282 169, Fax: 60-4-379 280

INFORMATION NEEDS SURVEY

A: Please complete this section in BLOCK LETTERS

Your name: ____________________ Position: ____________________

Organization: ____________________

Address: ____________________

City: ____________________ Province: ____________________

Country: ____________________ Postal Code: ____________________

Telephone: ____________________ Fax: ____________________

Please tick (✓) against one or more appropriate boxes (□) to answer the questions below:

B.1 Please describe your occupation/profession:

- □ Physician/Medical Doctor □ Public Health Specialist □ Government Official
- □ Pharmacist/Oxicologist □ Water & Sanitation Specialist □ NGO Staff
- □ Consultant/Specialist, please describe area of specialization: ____________________
- □ Researcher, please describe area of research: ____________________
- □ Librarian, please describe area of responsibility: ____________________
- □ Other, please describe: ____________________

B.2 How would you describe your organization?

- □ Private Practice □ Government Hospital/Clinic
- □ NGO
- □ University/Medical School □ Private Sector Company
- □ Local Municipality
- □ Other, please describe: ____________________

(Contd)
Appendix II.2  (Contd)

C.1 Please list below, in order of priority, the three subject areas related to environmental health which you are most interested in keeping up-to-date with over the next two years.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Names of environmental health subject areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td></td>
</tr>
<tr>
<td>Third</td>
<td></td>
</tr>
</tbody>
</table>

C.2 Please indicate if you will find information in the following subject areas useful to your work.

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Extremely useful</th>
<th>Very useful</th>
<th>Useful</th>
<th>Probably useful</th>
<th>Not useful</th>
<th>Definitely useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational Health and Safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Sanitation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aromatic and Medicinal Plants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional Local Medicines</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Toxins and Venoms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mosquito Borne Diseases</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

C.3 Would you be interested in purchasing information in the following subject areas from Asian databases for these databases see Appendix II.4 for reference at your work place?

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Very definitely will buy</th>
<th>Definitely will buy</th>
<th>May not buy</th>
<th>Probably will not buy</th>
<th>Definitely will not buy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational Health and Safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Sanitation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aromatic and Medicinal Plants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional Local Medicines</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Contd)
Appendix II.2  (Contd)

5. Natural Toxins and Venoms

6. Mosquito Borne Diseases

D.1 What is your annual budget for acquiring books, journals and other information products and services?

- Less than $1,000 US
- $4,000-$5,000 US
- $8,000-$9,000 US
- $1,000-$2,000 US
- $5,000-$6,000 US
- $9,000-$10,000 US
- $2,000-$3,000 US
- $6,000-$7,000 US
- More than $10,000 US
- $3,000-$4,000 US
- $7,000-$8,000 US
- Please state amount: US $__

D.2 What price are you willing to pay for a set of health-related references totalling 5,000 pages of information which are directly relevant and useful to your work?

- $100 US
- $500 US
- $900 US
- $1,300 US
- $1,700 US
- $200 US
- $600 US
- $1,000 US
- $1,400 US
- $1,800 US
- $300 US
- $700 US
- $1,100 US
- $1,500 US
- $1,900 US
- $400 US
- $800 US
- $1,200 US
- $1,600 US
- $2,000 US

E.1 How do you acquire most of your new reading and reference materials?

- Purchase from Bookstore, please provide name of store: ______________
- Orders via Distributor/Sales Agent, please provide name of agent: ______________
- Orders directly from Publisher
- Orders via Librarian

E.2 How do you find out about new reading and reference materials which you buy?

- Reviews/Advertisements in journal(s), please provide name(s) of journal(s): ____________________________________________
- Bibliographic Abstracts, please name abstracts or databases: ____________________________________________
- Catalogues and pamphlets received from publishers
- Recommendations from colleagues
- Recommendations from librarians
- Other ways, please elaborate: ____________________________________________

(Contd)
Appendix II.2  (Contd)

E.3 Do you use computerized databases on health topics for your work?

☐ Yes  ☐ No

If 'YES' please tell us which databases you use: ____________________________

If 'NO' please tell us why you do not use computer databases: ____________________________

E.4 When do you make most of your purchases of reading and reference materials?

☐ January  ☐ April  ☐ July  ☐ October
☐ February  ☐ May  ☐ August  ☐ November
☐ March  ☐ June  ☐ September  ☐ December
☐ No specific months, I make purchases throughout the year

E.5 Do you need to obtain endorsements from your colleagues before buying professional books and information services to support your work?

☐ Yes  ☐ No

If 'YES' please tell us whose endorsements do you need to obtain:

☐ Departmental Head  ☐ Librarian  ☐ Departmental/Library Committee
☐ Accountant/Administrator  ☐ Others please describe: ____________________________

F.1 Do you have access to a computer?  ☐ Yes  ☐ No

If 'YES' please specify computer type:

☐ IBM/PC  ☐ MAC/Apple  ☐ UNIX
☐ Others, please specify: ____________________________

F.2 Do you have access to a computer with a CD-ROM drive?

☐ Yes  ☐ No  ☐ I will have access within the next two years

F.3 If you have access to a computer with a CD-ROM drive, please tell us where the computer is located:

☐ My office  ☐ Library  ☐ Colleague's office
☐ Located at: ____________________________

F.4 Is the computer equipped with the 'WINDOWS' operating system?

☐ Yes  ☐ No

(Contd)
F.5 If you use CD-ROMs, please list below the titles which you use most frequently in connection with your work:

________________________________________

________________________________________

Thank you very much for participating in this survey Please return the completed questionnaire by airmail to Asian Environmental Health CD-ROM, Southbound, 9 College Square, 10250 Penang, Malaysia

(Contd)
Appendix II.2 (Contd)

1. Occupational health & Safety:
The database provides explanations of approximately 4,000 occupational health and safety terms, including entries for individual chemicals. The entries range from short definitions to descriptions of several hundred words.

2. Water Supply and Sanitation:
   (a) The following issues are covered in the databases: conventional and non-conventional methods of collecting, treating, using and recycling water, solid wastes and wastewater; water supply management; water resources planning; hygiene education; and community participation. The databases include bibliographic references and abstracts on research in the above areas.
   (b) Another database which is an integrated database on water and sanitation comprises four components: bibliography on water and sanitation; directory of projects; registry of experts; and list of institutions.

3. Medicinal and Aromatic Plants:
   (a) The database is a bibliographic database covering current world literature on medicinal and aromatic plants. Journal literature, patents and papers presented at international seminars and conferences in the field are included in the database.
   (b) Encyclopaedic series comprise 5,000 entries in alphabetical order, relating to plants, animals and animal products, mineral resources and industrial products of India. It is issued in two sub-series: Raw Materials sub-series which comprise 11 volumes of articles on plants, animals and mineral resources. The Industrial Products sub-series which contains nine volumes which deal with major, small-scale and cottage industries.

(Contd)
The database contains pharmacognostical, chemical, pharmacological and clinical information on plants, animals, minerals and other natural products of pharmaceutical value in traditional Chinese medicine. The information is provided in the form of bibliographic references which are accompanied by abstracts.

5. *Natural Toxins*:
Snake bites and the treatment; A colour guide to dangerous animals; A colour guide to dangerous plants; Snakes of medical importance in the Asia-Pacific region: are a series of guides which cover various aspects of the biochemistry, molecular biology, pharmacology and pathology of venoms and toxins.

TROPMED is a bibliographic database, with abstracts, covering diseases of tropical countries, particularly mosquito-borne diseases.¹

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¹ Bibliographic references are records of publications, papers and articles: each record will contain the name of the author(s), name/title of the book/journal/magazine, name of the publisher, place and data of publication, and volume/series number in the case of a journal/magazine.

Abstracts are brief descriptions of the contents of a book or article.
Research Findings on Feasibility

This part of the case describes the respondent profile, and analysis for assessing the market feasibility of the CD-ROM project.

RESPONDENT PROFILE

Postal Survey

Of the 1,894 questionnaires posted the researchers received back 832 completed questionnaires. Of these, 114 were rejected for a variety of reasons including non-response. The completed questionnaires came from all the countries surveyed (12 of them). Table III.1 summarizes the responses from different countries:

Prepared by Chin Saik Yoon, Publisher, Southbound, Penang, Malaysia, and Abhinandan K. Jain, Faculty, Indian Institute of Management, Ahmedabad, India. Help given by Mr Ashok Jambhekar, Librarian, Vikram Sarabhai Library, Indian Institute of Management, Ahmedabad in data collection and case preparation is gratefully acknowledged.

This case was written as part of the Marketing of Information Products and Services: A Guide for Librarians and Information Professionals, which was sponsored and funded by the International Development Research Centre, Canada and prepared by Indian Institute of Management, Ahmedabad.

Cases are prepared as a basis for class discussion. As educational or training material, cases are not designed to present illustrations of either correct or incorrect handling of administrative or management problems.
The response rate from the *World of Learning* list was found to be about 15 per cent, whereas it was 25 per cent from the TROPMED list.

The respondents belonged to a variety of professions. Deans/Directors, Librarians and Professors accounted for between 20 and 25 per cent each, whereas researchers and associate professors accounted for less than 10 per cent each.

**Focus Groups**

Focus group discussions, consultation with database owners and interviews with CD-ROM distributors in Manila, New Delhi, Bangkok and Singapore were satisfactorily conducted. Some of the focus group discussions could not be audio-taped (as in Singapore).

The researchers were satisfied with the responses and with the response rates of the two mailing lists used in the survey. They were also satisfied with the conduct of the focus group discussions.

**Feasibility of the CD-ROM**

The primary information used for assessing the market feasibility of the CD-ROM was:
- Usefulness of information.
- Willingness to buy.
Marketing Information Products and Services

- Willingness to buy at different price levels.
- Projection of demand, in numbers, at selected price levels.
- Cost of producing and marketing the CD-ROM at different levels of demand.
- Competing products and their prices.
- Preparation of cashflow statement for the next several years.

Usefulness of Information

Respondents were asked to rate the usefulness of each category of information, on a scale of usefulness. The responses are summarized in Table III.2.

<table>
<thead>
<tr>
<th>Category</th>
<th>Extremely Useful</th>
<th>Very Useful</th>
<th>Useful</th>
<th>Probably Not Useful</th>
<th>Definitely Not Useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational Health and Safety</td>
<td>23.6</td>
<td>26.9</td>
<td>32.7</td>
<td>11.5</td>
<td>5.3</td>
</tr>
<tr>
<td>Environmental Sanitation</td>
<td>17.2</td>
<td>27.3</td>
<td>27.8</td>
<td>17.7</td>
<td>10.0</td>
</tr>
<tr>
<td>Aromatic and Medicinal Plants</td>
<td>17.8</td>
<td>27.4</td>
<td>26.0</td>
<td>18.8</td>
<td>10.1</td>
</tr>
<tr>
<td>Traditional Local Medicines</td>
<td>20.0</td>
<td>21.4</td>
<td>27.1</td>
<td>18.6</td>
<td>12.9</td>
</tr>
<tr>
<td>Natural Toxins and Venoms</td>
<td>9.4</td>
<td>28.2</td>
<td>43.6</td>
<td>10.9</td>
<td>7.9</td>
</tr>
<tr>
<td>Mosquito Borne Diseases</td>
<td>11.0</td>
<td>13.4</td>
<td>29.4</td>
<td>30.5</td>
<td>15.7</td>
</tr>
<tr>
<td>Average Usefulness</td>
<td>16.5</td>
<td>24.1</td>
<td>31.1</td>
<td>18.0</td>
<td>10.3</td>
</tr>
</tbody>
</table>

The breakdown could be collapsed into a table of positive and negative ratings for the usefulness of each information category. Respondents giving a rating within the scale of 'Extremely Useful', 'Very Useful' and 'Useful' could be considered as reacting positively to a particular category of information. On the whole, about 72 per cent respondents found the proposed type of information to be useful.
Willingness to Buy

Willingness to buy was obtained through the question: ‘Would you be interested in purchasing information in the following sub-areas from Asian databases (for descriptions of these databases see Appendix II.2)?’ (Question no. C.3 of the questionnaire.) The responses are summarized in Table III.3 On the whole, about 49 per cent respondents were willing to buy the databases.

<table>
<thead>
<tr>
<th>Operational Health and safety</th>
<th>Very Definitely Will Buy</th>
<th>Definitely Will Buy</th>
<th>May Buy</th>
<th>Probably Will Not Buy</th>
<th>Definitely Will Not Buy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanitation</td>
<td>2.0</td>
<td>5.9</td>
<td>42.6</td>
<td>27.9</td>
<td>21.6</td>
</tr>
<tr>
<td>Aromatic and Medicinal Plants</td>
<td>2.4</td>
<td>11.1</td>
<td>38.6</td>
<td>26.1</td>
<td>21.7</td>
</tr>
<tr>
<td>Traditional Local Medicine</td>
<td>3.9</td>
<td>8.7</td>
<td>41.5</td>
<td>27.1</td>
<td>18.8</td>
</tr>
<tr>
<td>Natural Toxins and Venoms</td>
<td>3.4</td>
<td>8.2</td>
<td>38.6</td>
<td>25.1</td>
<td>24.6</td>
</tr>
<tr>
<td>Mosquito Borne Diseases</td>
<td>1.6</td>
<td>8.4</td>
<td>29</td>
<td>27.2</td>
<td>33.8</td>
</tr>
<tr>
<td>Average</td>
<td>2.7</td>
<td>9.2</td>
<td>36.8</td>
<td>26.2</td>
<td>25.1</td>
</tr>
</tbody>
</table>

The willingness to buy was then compared with the responses on usefulness. The categories of information surveyed were well received, averaging 71.75 per cent acceptance as useful amongst the respondents. However, the willingness to pay for such useful information was relatively averaged at 49 per cent. This finding was not surprising given the existing reluctance of users to pay for information they require. Overall, the responses were found to be encouraging.

Respondents were posed an open-ended question. They were asked to list, in order of priority, the three subject areas related to environmental health which they were most interested in keep-
ing up-to-date within the next two years. Their responses are summarized in Table III.4.

<table>
<thead>
<tr>
<th>TABLE III.4</th>
<th>Unaided Response in Important Areas (Percentage of Total Respondents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance Ranking</td>
<td>First</td>
</tr>
<tr>
<td>Occupational Health</td>
<td>20</td>
</tr>
<tr>
<td>Water Supply and Sanitation</td>
<td>10</td>
</tr>
<tr>
<td>Pollution, Environment, Toxins</td>
<td>10</td>
</tr>
<tr>
<td>Medicinal and Aromatic Plants</td>
<td>8</td>
</tr>
<tr>
<td>Diarrhoeal Disease</td>
<td>6</td>
</tr>
<tr>
<td>Natural Toxins</td>
<td>5</td>
</tr>
<tr>
<td>Mosquito Borne Diseases</td>
<td>4</td>
</tr>
<tr>
<td>Biological and Chemical Hazards</td>
<td>4</td>
</tr>
<tr>
<td>Cancer</td>
<td>4</td>
</tr>
<tr>
<td>Traditional Local Medicine</td>
<td>—</td>
</tr>
<tr>
<td>Ecology and Water Management</td>
<td>—</td>
</tr>
</tbody>
</table>

A comparison of the results showed that the subjects chosen for the CD-ROM were quite useful although, one new subject area of pollution, environment, and toxin could be more useful than some of the subject areas already chosen.

**Willingness to Buy at a Price**

Respondents were asked 'What price are you willing to pay for a set of health related references totalling 5000 pages of information, which are directly relevant and useful to your work?'

This information was analyzed for individuals and institutions, the latter by assuming that individuals working in the same organization may not subscribe separately. Results are summarized in Table III.5.

**Demand Projection**

**At Different Prices**

For projecting demand, the following method was used.
TABLE III.5  
Willingness to Buy at Different Prices

<table>
<thead>
<tr>
<th>At Price USD</th>
<th>Individuals</th>
<th>Percentage Willing to Buy Institutions in Countries Belonging to</th>
<th>Demand in Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Group I</td>
<td>Groups II &amp; III</td>
</tr>
<tr>
<td>$100</td>
<td>72</td>
<td>73</td>
<td>81</td>
</tr>
<tr>
<td>$200</td>
<td>50</td>
<td>43</td>
<td>45</td>
</tr>
<tr>
<td>$300</td>
<td>44</td>
<td>29</td>
<td>39</td>
</tr>
<tr>
<td>$400</td>
<td>40</td>
<td>24</td>
<td>32</td>
</tr>
<tr>
<td>$500</td>
<td>29</td>
<td>19</td>
<td>23</td>
</tr>
<tr>
<td>$600</td>
<td>27</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>$700</td>
<td>26</td>
<td>7</td>
<td>10</td>
</tr>
</tbody>
</table>

1. Count distinct institutions (in the areas of subjects selected in the CD-ROM) in the *World of Learning* in each country, identified earlier for targeting (Appendix II.2).
2. Count distinct institutions in each group of countries.
3. Multiply the number of distinct institutions by the percentage willing to buy in the group of countries, as found from the survey.
4. Multiply the number of those willing to buy by the percentage willing to pay a specific price, as obtained in the previous section.
5. Step 4 was repeated for all price levels US $100 to US $700.

The projected demand at different price levels was thus arrived at and varied from a low of 120 at US $700, to a high of 1200 at US $100 (see Table III.5).

**Demand Forecast in Ten Years**

Forecast of the demand in each of the next 10 years was also made. In the first year, the potential market that could be tapped was assessed as 30 per cent of the demand at a specific price. This was expected to go up by 5 per cent in each subsequent year to reach 75 per cent in the tenth year.
Cost of Producing and Marketing CD-ROMs

Besides weighing the buyers appraisal of value and affordability of the disk, the major element of production cost must be considered at the same time for assessing the market feasibility. The costing is partly based on the estimates provided by the technical consultant.

<table>
<thead>
<tr>
<th>One Time Costs</th>
<th>in CAD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD-ROM processing hardware</td>
<td>30,000</td>
</tr>
<tr>
<td>CD-ROM software</td>
<td>40,000</td>
</tr>
<tr>
<td></td>
<td>70,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recurring Annual Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware maintenance</td>
</tr>
<tr>
<td>Software maintenance</td>
</tr>
<tr>
<td>Operational costs</td>
</tr>
<tr>
<td>Meetings of database owners</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Per Issue Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD-ROM mastering</td>
</tr>
<tr>
<td>CD-ROM replication: 300 disks × $4</td>
</tr>
<tr>
<td>Search and retrieval software licence fee: 300 disks × $ 22 per disk*</td>
</tr>
<tr>
<td>Total for one issue</td>
</tr>
<tr>
<td>Total for two issues</td>
</tr>
</tbody>
</table>

* The search and retrieval software licence fee varies according to the number of disks as shown below:

<table>
<thead>
<tr>
<th>Number of disks</th>
<th>Licence fee CAD $</th>
<th>Number of disks</th>
<th>Licence fee CAD $</th>
</tr>
</thead>
<tbody>
<tr>
<td>1–24</td>
<td>50</td>
<td>500–749</td>
<td>20</td>
</tr>
<tr>
<td>25–49</td>
<td>40</td>
<td>749–999</td>
<td>18</td>
</tr>
<tr>
<td>50–99</td>
<td>30</td>
<td>1000–1999</td>
<td>16</td>
</tr>
<tr>
<td>100–199</td>
<td>26</td>
<td>2000–2999</td>
<td>14</td>
</tr>
<tr>
<td>200–299</td>
<td>24</td>
<td>3000–4999</td>
<td>12</td>
</tr>
<tr>
<td>300–499</td>
<td>22</td>
<td>5000 +</td>
<td>10</td>
</tr>
</tbody>
</table>

Although the study recommended the promotion of five sub-sets of products based on one overarching theme (described in Part IV of the case), the technical consultant confirmed that these sub-sets could be mounted on one CD-ROM. Access could be provided to each of the sub-sets, through search and retrieval
software or passwords provided separately to users on floppy disks, individualized according to the subscriptions ordered by each user. In effect, a single CD-ROM was capable of carrying all the five sub-sets (The estimates are based on the pressing of a single disk). The researcher suggested amortising the one time cost over the first five years, as that was a reasonable life span for hardware and software items.

In addition to the above costs, $30,000 was set aside for the cost of promotional activities and materials; and 20 per cent as sales commission for distributors and sales agents. Current commission ranged from 20 per cent to 35 per cent. The total cost of marketing was expected to be 25 per cent of the product price.

**Competing Products and Their Prices**

The survey confirmed the findings obtained from the focus groups that many of the potential users were MEDLINE subscribers; 44.2 per cent of the respondents bought MEDLINE.

In one of the focus groups, a suggestion was made that the proposed CD-ROM aim to complement MEDLINE as a marketing strategy. This could be done by covering journals and other publications not abstracted by MEDLINE.

A review of the offerings in the market place identified another line of information products offered by MICROMEDEX, a Denver based company, which might compete with the proposed CD-ROM. Although these products had not shown up in the survey, the researchers felt that producers of the CD-ROM should keep them in mind while designing it.

MICROMEDEX's computerized clinical information systems contained the following databases:

- Commercial, Pharmaceutical, Biological, Substance Identification and Management POISONINDEX system—Management/Treatment Protocol Format and Managements List.
- Industrial/Environmental, Chemical Substance Identification and Management: TOMES System.
The price of the competing product MEDLINE was US $2,500 for a full subscription (12 monthly updates). Another product, TOMSPLUS was also priced in the same way. However, a third product, CCIS Martindale, was priced US $500.

**Overall Assessment of Market Feasibility**

The contents of the CD-ROM were found to be useful (72 per cent) and about 49 per cent of the respondents were willing to purchase the information. Of those who were willing to purchase, different segments were willing to buy at specific prices. Considering the demand and the costs at different prices, the researchers prepared cash flow statements at these different prices.

Miss Lee has been wondering whether she should recommend the project for acceptance and funding by IDRC.

**QUESTIONS FOR DISCUSSION**

1. Please understand the data analysis presented in the case to arrive at specific decision/inference.
2. What is your assessment of overall feasibility of the Asian CD-ROM on Health and Environment on the basis of the analysis given in the case? Should the CD-ROM be launched or not? Why?
3. To arrive at (strengthen) your decision what further analysis would you like to conduct on the data available.
4. Please prepare (plane for) cash flow analysis to assess the feasibility on the basis of given data.
Recommendations on the Marketing Plan

Miss Lee, the information specialist in the South East and South Asian Regional Office of IDRC, was reviewing the findings and recommendations made by Southbound. Southbound was the agency appointed to study the market for the Asian CD-ROM on health and environment. She had already reviewed the feasibility of the project (See Part III of the case). The review of market feasibility of the CD-ROM, along with the recommended marketing strategy, would form the basis of the final decision to be taken in a meeting of the database supplying organizations and the staff of IDRC. (Results of the analysis for market feasibility were presented in Part III of the case.) While about 72 per cent of the respondents found the CD-ROM useful, only 49 per cent of them were positive that they would buy the product.

Prepared by Chin Saik Yoon, Publisher, Southbound, Penang, Malaysia, and Abhinandan K. Jain, Faculty, Indian Institute of Management, Ahmedabad, India. Help given by Mr Ashok Jambhekar, Librarian, Vikram Sarabhai Library, Indian Institute of Management, Ahmedabad, in data collection and case preparation is gratefully acknowledged.

This case was written as part of the Marketing of Information Products and Services: A Guide for Librarians and Information Professionals, which was sponsored and funded by the International Development Research Centre, Canada and prepared by Indian Institute of Management, Ahmedabad.

Cases are prepared as a basis for class discussion. As educational or training material, cases are not designed to present illustrations of either correct or incorrect handling of administrative or management problems.
BUYERS AND USERS

Specialized research/professional CD-ROMs of the type studied, were bought by institutions centrally, from a pooled budget, to meet the information needs of multiple users. Many of the actual buyers—people who actually sign the purchase orders—were not users. Librarians were a good example. Similarly, many of the users—doctors, researchers and development specialists—were not buyers of the product. They recommended purchases but their proxies, librarians, did the actual purchase. The study set out to confirm if this set of norms applied to the CD-ROM.

The survey asked respondents if they needed to obtain endorsements from their colleagues, before buying professional books and information services to support their work. Results showed that while about 46 per cent of the respondents needed endorsements, others did not require them.

The respondents requiring endorsements, identified the following as the categories of colleagues and supervisors from whom they had to obtain the endorsements:

- Departmental head 27.9%
- Departmental/library committee 22.3%
- Departmental head and committee 6.1%
- Accountant 5.6%
- Departmental head and librarian 5.6%
- Librarians 4.5%
- Librarians and committee 4.5%

The consensus of the focus groups was that most purchases required the endorsements of heads of departments and deans.

POSITIONS AND OCCUPATIONS OF INTERESTED RESPONDENTS

The survey asked the respondents to indicate their interest in purchasing information databases contributed by the database
owners. They were invited to rank their interests in five categories: 'Very definitely will buy', 'Definitely will buy', 'May buy', 'Probably will not buy', and 'Definitely will not buy'. The researchers grouped answers within the first three categories, as an indication of positive interest in the disk. The distribution of major groups of respondents who have indicated an interest in buying the CD-ROM, according to their positions and occupations, is shown in Tables IV.1 and IV.2 respectively.

**TABLE IV.1**  
Buyer Profile: Position

<table>
<thead>
<tr>
<th>Position</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dean/Director</td>
<td>26.4</td>
</tr>
<tr>
<td>Librarian/Documentation Officer</td>
<td>20.8</td>
</tr>
<tr>
<td>Professor/Chair/Reader</td>
<td>18.7</td>
</tr>
<tr>
<td>Acting/Assistant Dean</td>
<td>10.7</td>
</tr>
<tr>
<td>Researcher/Scientist/Consultant</td>
<td>9.2</td>
</tr>
<tr>
<td>Associate Professor/Instructor</td>
<td>4.2</td>
</tr>
</tbody>
</table>

**TABLE IV.2**  
Occupation of Buyer

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Librarian</td>
<td>22.8</td>
</tr>
<tr>
<td>Researcher</td>
<td>10.8</td>
</tr>
<tr>
<td>Medical Doctor</td>
<td>6.3</td>
</tr>
<tr>
<td>Pharmacist/Toxicologist</td>
<td>4.5</td>
</tr>
<tr>
<td>Medical Doctor/Researcher</td>
<td>3.9</td>
</tr>
<tr>
<td>Consultant</td>
<td>3.6</td>
</tr>
<tr>
<td>Public Health Specialist</td>
<td>3.3</td>
</tr>
<tr>
<td>Medical Doctor/Consultant</td>
<td>3.3</td>
</tr>
<tr>
<td>Consultant/Researcher</td>
<td>3.3</td>
</tr>
<tr>
<td>Nursing Specialist</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Types of Institutions Interested in Buying**

The researchers next analysed the type of institutions interested in buying the CD-ROM (see Table IV.3)
TABLE IV.3  Respondent Profile: Institutions

<table>
<thead>
<tr>
<th>Institutional Type</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>University/Medical School</td>
<td>65.9</td>
</tr>
<tr>
<td>Government Department and Statutory Body</td>
<td>11.4</td>
</tr>
<tr>
<td>Research Institute</td>
<td>9.0</td>
</tr>
<tr>
<td>NGO</td>
<td>5.7</td>
</tr>
<tr>
<td>Government Hospital/Clinic</td>
<td>5.1</td>
</tr>
<tr>
<td>WHO</td>
<td>2.4</td>
</tr>
<tr>
<td>Private Sector/Practice</td>
<td>0.6</td>
</tr>
<tr>
<td>All Institutions</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Groups of Countries Interested in Buying

The groups of countries of respondents, interested in buying the disk, are given in Table IV.4.

TABLE IV.4  Respondent Profile: Country Group

<table>
<thead>
<tr>
<th>Country Group</th>
<th>Percentage of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>30</td>
</tr>
<tr>
<td>II &amp; III</td>
<td>42</td>
</tr>
<tr>
<td>IV</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

Profile of Potential Subscribers

The survey showed that most of the potential subscribers for the CD-ROM would be deans, heads of departments, professors and researchers from universities, research institutes and government health networks. They had an average annual budget of US $1,500 for purchasing reference materials. Focus group discussions, involving representatives from the pharmaceutical industries, indicated a strong interest in buying. The above subscribers were likely to come from North America, and South and South-East Asia.
The researchers made recommendations on the product on the basis of the following analysis:

- Content of the product.
- Strengths and weaknesses of the prototype.
- Retrieval software.
- Hardware preference and access.
- Sustainability from the point of view of participation of database providers.

Contents

The information on usefulness and intention to buy, as analysed in Part III of the case, clearly suggested that the chosen databases were quite acceptable. In addition, a new field was discovered, which could be termed as pollution, environment, toxics, biological/chemical hazards. This was obtained through information from the postal survey. The focus group discussion suggested different areas of interest in different countries. Therefore, the researchers recommended that all the databases tested in the research enjoyed a good market and hence, must be included in the CD-ROM. In addition, they suggested that different groupings could be made of the original databases and that some more groups (as identified in the focus group discussions) could also be included. The agency suggested five groupings: (i) animals, plants, and minerals of medicinal and economic importance, (ii) health and safety, (iii) water and health, (iv) mosquito borne diseases, and (v) traditional Asian medicine and medicinal and aromatic plants.

Product Enhancement

Colour images, graphics, and photographs should be incorporated in the database, whenever they illustrate a topic. Some possibilities were:

- Traditional medicine: Illustrations of plants and methods of preparing them.
• *Wealth of India*: Pictures of plants, animals, and methods of management/cultivation, harvesting and processing.
• *NICECIS*: Pictures of safety devices and illustrations to explain concepts.
• *Natural toxins*: Pictures as presently available.
• *Meteorological data*: May be presented in the form of a GIS package.
• *Expert system for mosquito identification*: Illustrations of mosquito types.

Full motion video of various methods of processing medicinal plants and other video footages were requested by focus group members. As the hardware needed to run such disks was expensive and not widely available, this point of enhancement was recommended to be noted for future, when the cost of the hardware became more affordable.

**Editing and Design**

• *Standardization*: of fields and terminologies, across all databases, would be necessary to forge them into a series.
• *Typography*: italics should be used for all scientific names (many researchers in the focus groups were disturbed that this convention was not followed in parts of the prototype).
• *Change*: the present font to a more legible font, if technically feasible.
• *Image size*: users wanted full screen size illustrations for those images which were intended to assist the identification of objects; the present size did not serve this purpose effectively.

**Retrieval Software**

CCFIND and CCPUB softwares were found to work well, and were recommended to be adopted for the actual CD-ROM. Users, especially librarians, wanted the following additional features:

• Truncated Boolean searches.
• Facility to store and retrieve search profiles.
Facility to search all databases with one command in CCFIND.
A thesaurus on disk.

The researchers recommended:

CCPUB runs in the Windows environment. This is where opinions differ between respondents of the survey and focus groups. The survey found 70.3% of the sample owning computers had access to the operating software. The focus groups, however, expressed reservations of having easy access to the software and powerful hardware required to run it. Some also expressed dislike for manipulating the mouse. Yet focus groups were unanimous in liking the colour photographs which CCPUB running in Windows could offer. We recommend that we decide in the favour of CCPUB and Windows. The survey confirmed fairly extensive access, and we believe that members of the focus group will accept the operating system after training. Hardware prices—with the introduction of Pentium—is in a free fall and the cost of video cards is also falling. It is likely that by the time the CD-ROM is launched in the market, the hardware will be more affordable than it is now and Windows more widely used.

**Printing Facility**

The recommendations on the printing facility were:

The existing CCFIND and CCPUB printing capabilities were very satisfactory for text and of acceptable quality for illustration. The technical feasibility of incorporating graphic files in Postscript language may be explored. Training and research institutions will find this an attractive feature for the production of publications and training support materials via laser-jet printers.

**PLACE**

The respondents were asked about the channels through which they acquired most of their new reading and reference materials. Since librarians represented a principal channel, further analysis
of the survey data was done to determine the channels through which the librarians, themselves, obtained their supply of information products. Table IV.5 summarizes the results.

<table>
<thead>
<tr>
<th>Channel</th>
<th>Percentage of Total Sample</th>
<th>Percentage of Librarians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct from Publisher</td>
<td>43</td>
<td>42</td>
</tr>
<tr>
<td>Through Librarian</td>
<td>40</td>
<td>12</td>
</tr>
<tr>
<td>From Bookstore</td>
<td>31</td>
<td>29</td>
</tr>
<tr>
<td>Via Distributor</td>
<td>30</td>
<td>64</td>
</tr>
</tbody>
</table>

The focus groups gave different ideas of what they felt were good places for the marketing of the proposed CD-ROM. Indian groups suggested the publication division of a national scientific agency be appointed as the principal distributor in India. There were two reasons for this suggestion: the first was that this was a highly reputable institution, which would lend much credibility to a new and untested product, and the second that, as a government institution, it would enjoy lower customs tariffs and, therefore, allowing savings to be passed on to Indian buyers. The proposed CD-ROM could consequentially be competitively priced in the Indian market.

The Thai and Filipino groups suggested working through government health departments. The idea was to get top health officials convinced of the usefulness of the CD-ROM, with the ultimate objective of winning their endorsements for the disk, and inclusion of demonstrations and use of the disk in in-service training programmes.

The Indian, Filipino and Thai groups were unanimous in their recommendation of national medical conventions and annual meetings of professional associations, as channels for creating awareness of the CD-ROM. Some of these conventions were periodically held in conjunction with regional and international gatherings; this could expose the disk to bigger audiences.
Cross-Selling

The researchers were interested in the potential for cross-selling amongst members of the consortium. Cross-selling, in the context of this study, was taken to mean the promotion of new allied products to existing groups of subscribers, belonging to various members of the consortium. This pooling of subscribers' information could be a major advantage from the viewpoint of marketing. The survey data were analyzed to gauge the interest of subscribers of individual database owners, in purchasing the information offered by other owners. Table IV.6 summarizes the analysis.

<table>
<thead>
<tr>
<th></th>
<th>Occupational Health</th>
<th>Environmental Sanitation</th>
<th>Aromatic and Medicinal Plants</th>
<th>Traditional Local Med.</th>
<th>Natural Toxins and Venoms</th>
<th>Mosquito Borne Diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customers of</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TROPMED</td>
<td>52.1</td>
<td>65.8</td>
<td>NA</td>
<td>54.2</td>
<td>58.5</td>
<td>81.5</td>
</tr>
<tr>
<td>APPROTECH</td>
<td>37.6</td>
<td>72.3</td>
<td>41.2</td>
<td>64.8</td>
<td>88.9</td>
<td>46.7</td>
</tr>
<tr>
<td>SEARCA</td>
<td>50.0</td>
<td>25.0</td>
<td>80.0</td>
<td>75.0</td>
<td>25.0</td>
<td>25.0</td>
</tr>
<tr>
<td>IDRC</td>
<td>63.6</td>
<td>83.3</td>
<td>36.4</td>
<td>75.0</td>
<td>63.6</td>
<td>66.7</td>
</tr>
</tbody>
</table>

The results indicated a good potential for cross-selling amongst the four organizations for which data were available. The strength of the consortium could, thus, be exploited in the promotion of the CD-ROM.

Recommendations

The following were found to be the best places for marketing the CD-ROM:

- Libraries.
- National centres of excellence in the fields covered.
- Conventions of professional associations.
- Regional ‘landmark institutions’ (a term used by the researchers to describe organizations frequently visited by researchers, practitioners, policy-makers and government
officials on study/technical tours: IDRC, UNESCO, WHO and ILO Regional Offices).
- Institutions represented by the database owners.

**PRICE**

Pricing was an important decision for both financial viability and tapping the potential in the long run. Balancing the two was not an easy task. The following recommendations were made, keeping in view the twin objectives in mind:

- The price for each theme in the series be fixed at US $400 for the North countries and US $ 200 for the South Countries for an annual subscription comprising two updates.
- Subscribers taking up more than one sub-thematic area be given discounts based on the following scale:
  2 themes: 10 per cent  
  3 themes: 20 per cent  
  4 themes: 30 per cent  
  5 themes: 40 per cent
- Offer 20 per cent discount or 'free' themes for the launch period of the CD-ROM to subscribers.
- Subscribers who use the disks on computer networks will pay the following licence fees:

<table>
<thead>
<tr>
<th>Number of work-stations on the Network</th>
<th>Annual Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 to 5</td>
<td>$600</td>
</tr>
<tr>
<td>6+</td>
<td>$800</td>
</tr>
</tbody>
</table>

**PROMOTION**

Promotion was going to be a key decision area for the consortium. Southbound made specific recommendations about promotion: target audience, objectives, promotion tools to be used for each type of target audience, broad outline of messages for each tool, timing of promotion and budget. Before making these
recommendations, the agency had analysed the results of the research.

**Analysis of Research Results**

**Sources of Information**

The study set out to discover the buyers' sources of information of new reading and reference materials. A summary of the survey results is given in Table IV.7.

<table>
<thead>
<tr>
<th>Sources of Information</th>
<th>Percentage Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalogues and Pamphlets</td>
<td>16.5</td>
</tr>
<tr>
<td>Catalogues and Colleagues' Recommendation</td>
<td>12.9</td>
</tr>
<tr>
<td>Catalogues, Colleagues' Recommendation, Reviews and Abstracts</td>
<td>10.6</td>
</tr>
<tr>
<td>Catalogues, Colleagues' Recommendation and Reviews</td>
<td>8.2</td>
</tr>
</tbody>
</table>

**Timing**

The timing of the launch and distribution of promotional materials was considered important. For example, wrong timing may lead to contact with potential customers at a time when they did not have funds. The survey asked respondents when they made most of their purchases. About 80 per cent of the respondents had no specific time for placing orders. The rest of the responses were between 1 to 2 per cent in January, February, April, May, June, October and November.

**Strategies**

The focus groups were asked to suggest promotional methods which they felt would be most effective for selling the CD-ROM. They recommended several promotional strategies:

- Concentrating on libraries.
- Conducting demonstrations for the management level staff of institutions.
- Mailing promotional materials.
- Providing demonstration discs.
- Arranging donors to provide hardware and software to user-institutions which could not afford to purchase them on their own.
- Promotion through NGO networks.
- Conducting training sessions.
- Giving talks about the CD-ROM at professional meetings.
- Advertising in professional journals.
- Pricing the product reasonably.
- Exhibiting the product at professional congresses.
- Lending out the CD-ROM to potential users for short periods.
- Selling through credible institutions such as universities, ministries and health departments.

**Strategies for Target Segments**

The specific strategies recommended for each target segment along with objectives are summarized in Table IV.8 (see Exhibit IV.1 for details of the strategies).

**Budget and Timing**

The budget for promotion was set at US $30000.

The majority of respondents said that they had no specific time for purchases. The minority who had specific times fell into two clusters: one that purchased in the first half of the year, peaking in May, and the others buying in the last quarter, peaking in October and November.

The researchers recommended that promotion be carried out three times a year to coincide with peak buying as follows:

- First cycle: February
- Second cycle: April
- Third cycle: September

This was likely to tap the market when fresh funds were being released for a new year, as well as the spending peaks towards the end of each financial year, as departments and libraries worked to fully disburse balance funds.
### Objectives and Strategies of Target Segments

<table>
<thead>
<tr>
<th>Segment</th>
<th>Objectives</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>End-Users</td>
<td>Convince of product usefulness. Create awareness.</td>
<td>Reviews and articles in major medical journals.</td>
</tr>
<tr>
<td></td>
<td>Convince of product usefulness and reliability for personal use.</td>
<td>Demonstrations at professional conferences. Advertisements in journals.</td>
</tr>
<tr>
<td></td>
<td>Motivate to recommend purchase.</td>
<td>Inserting flyers in journals.</td>
</tr>
<tr>
<td>Librarians/</td>
<td>Create awareness.</td>
<td>Pre-publication bulletins.</td>
</tr>
<tr>
<td>Deans/</td>
<td>Convince of usefulness to institutions.</td>
<td>Reviews and articles in journals.</td>
</tr>
<tr>
<td>Heads of</td>
<td></td>
<td>Letters of endorsement from authorities.</td>
</tr>
<tr>
<td>Department</td>
<td>Motivate to recommend and approve for staff use.</td>
<td>Demonstrations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Personal sales calls.</td>
</tr>
<tr>
<td>Distributors</td>
<td>Create awareness.</td>
<td>Select and appoint newly established distributors.</td>
</tr>
<tr>
<td>/Sales Agents</td>
<td>Convince of usefulness and reliability.</td>
<td>Pre-publication bulletins.</td>
</tr>
<tr>
<td></td>
<td>Support marketing efforts.</td>
<td>Demonstrations and training.</td>
</tr>
<tr>
<td>International</td>
<td>Create awareness.</td>
<td>Provide sales promotion kit.</td>
</tr>
<tr>
<td>Development</td>
<td>Convince of reliability and usefulness for developing country institutions.</td>
<td>Pre-publication bulletins.</td>
</tr>
<tr>
<td>Agencies</td>
<td>Motivate provision of hardware and software for developing country institutions.</td>
<td>Personal visits and demonstrations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IDRC initiate inter-agency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide samples and sales material.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contribute articles and illustrations for agency publications and periodicals.</td>
</tr>
</tbody>
</table>

Miss Lee has been wondering whether she should recommend the acceptance of the recommendations as they were, or change some in the light of her understanding of the analysis and the situation, or request Southbound for more analysis.
Promotional Strategies for Target Segment

Strategies for End-Users
- Reviews and technical papers placed in selected major medical journals.
- Direct mailing of packages ('mail shots') comprising an introductory letter signed by an appropriate database owner and a promotional brochure.
- Demonstrations and exhibits at congresses.
- Advertisements in journals.
- Insertion of promotional flyer ('insert') in journals.

Strategies for Librarians and Deans/Heads of Departments
- Pre-publication bulletins.
- Reviews and technical papers in library and medical journals.
- Mail shots accompanied by letters, or messages or endorsement from local ministry of department or health and six copies of the brochure.
- Demonstrations and exhibits at congresses.
- Demonstration and sales call.

Strategies for Distributors/Sales Agents
- The ideal distributor/sales agent to be appointed was thought to be the one who was relatively new in the CD-ROM business and who was actively sourcing new products to sell. Established agents and distributors were already representing competing, higher priced products with a higher profit margin—they were likely to allocate less efforts to promoting the CD-ROM.
- Pre-publication bulletins.
- Personal calls, demonstrations and training.
- Provision of sales kit comprising
  - Recommended sales strategy.
  - Demonstration disks.
  - Sample CD-ROM.
  - Promotional brochures.
  - Part funding for participation in exhibitions.

Strategies for International Development Agencies
- Pre-publication bulletins.
- Personal visits, briefings and demonstration.
- Inter-agency consultations, led by IDRC, to explore bulk purchases of the CD-ROM for free distribution to users who may lack funds to buy the CD-ROM.
Recommendations on the Marketing Plan

Provision of demonstration disks, sample CDs and promotional brochures for distribution to agencies' contacts: the preferred alternative is agencies providing letters of endorsement and their mailing-lists for direct mailing by us.

Provision of articles and illustrations for publication in agencies' magazines and newsletters.

QUESTIONS FOR DISCUSSION

1. Please understand and critique the analysis presented in the case for deciding/infering:
   - Target customers
   - Product Design
   - Places for marketing
   - Pricing
   - Promotion

2. Do you agree with the recommendations made and analysis done for the same?

3. Please suggest suitable modifications in the data analysis (plan) for arriving at appropriate decision in the areas mentioned above and justify the same.