MINISIS: An Evaluation

Michael Graham
2422 Fairmile Road
RR 4, Kemptville, ON
K0G 1J0
(613) 258-2901

Evaluation Unit
International Development Research Centre
PO Box 8500, Ottawa, Ontario K1G 3H9

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Executive Summary

This evaluation was designed to help IDRC define its future relationship with MINISIS, a software package designed specifically to meet the information management needs of Third World users and supported by the Centre since 1976. Both interviews and email surveys were used to gather data. The primary sources of information were current and past users of MINISIS. The 79 MINISIS users who provided input had, on average, 9.1 years of experience with the software. In addition, interviews were conducted with 15 current and former IDRC staff members with expertise in information sciences.

Findings from the evaluation are summarized in four key areas: users' perceptions of MINISIS (both positive and negative); the changes that have occurred in the "environment" in which MINISIS finds itself; the relationship between MINISIS and IDRC; and the type of support needed for a successful software product.

Positive perceptions

MINISIS has been a success. When it was first developed it was a ground-breaking application that catered to well-defined needs, and several of its features continue to make it valuable to users. These features include multilingual thesaurus management, excellent search and retrieval capabilities designed for text-intensive applications, and a database structure that is easy to create and modify to meet user requirements. In addition, MINISIS staff are recognized for their commitment and the quality of their work. MINISIS's features have been delivered at low cost and in a manner that has encouraged a cooperative association among MINISIS users and contributed positively to the reputation of both MINISIS and IDRC.

Negative perceptions

The most common concerns expressed about MINISIS were with regard to the recent slowness of product development and delays in the incorporation of promised features. Many users who used to believe that MINISIS was in the forefront of database development think that it has fallen behind as other products with similar features have become available. There is clear concern in the user community about the future of MINISIS and the rate and reliability of product development.

Changes in environment

The world of information and communication has changed rapidly and enormously during the 23 years in which IDRC has nurtured MINISIS. Although MINISIS was in 1976 a ground-breaking application for which there was great need in the developing world, the situation is radically different in 1998. MINISIS now finds itself in a very competitive environment and is being compared with, and evaluated against, a host of other products in both developing and developed countries. With the global spread of electronic communications and the increasing "connectivity" of many Third World organizations, access to software products and information about them has increased rapidly and users throughout the world expect that the software they select will be compliant with the latest Internet protocols.

Relationship between MINISIS and IDRC

With the restructuring of IDRC and the shift of MINISIS to the Resources Branch, there has been a virtual divorce of MINISIS from the program activities of the Centre. Today, just two Centre projects use MINISIS. Internally, it is only within the library that MINISIS is used on an on-going basis. There is now almost no contact between MINISIS staff and IDRC program staff. Program officers are focused on Internet-based information management, and even those with a long association with MINISIS, do not feel that MINISIS has kept up with developments in technology. Therefore, MINISIS is rarely considered in Centre-supported program activities and, instead, projects are opting for other software products. MINISIS lacks a supportive environment within IDRC because it is not associated with on-going program activities.

Support needed for software development

If software development is to keep pace with changing markets, it requires continual and substantial support for human resources to write and revise the code and for operational activities such as marketing and technical support. MINISIS does not generate the level of earnings needed to fully support such product development because it discounts the price of its software for developing country users. This means that MINISIS will not be commercially viable and will always depend on external support.

The Centre may have had an opportunity to make MINISIS more commercially successful in the early 1990s, but it failed to make the necessary investments because it faced its own budget constraints. It appears that the Centre did not fully appreciate the level of investment that would be needed to make MINISIS a source of revenue generation. As well, no commercial partner was identified to collaborate with MINISIS in the North as had been recommended in a previous study. MINISIS was, therefore, faced with the need to divide its attention between subsidized Third World clients and paying customers in the North. The delays experienced in product development can, at least in part, be attributed to a lack of the resources needed to respond quickly enough to changing market conditions.

This evaluation identifies several issues the Centre will need to consider as it seeks to define its future relationship with MINISIS. For each issue, several related points are raised to help guide discussion about IDRC's future relationship with MINISIS. The issues cover aspects of broad Centre policy as well as future directions for MINISIS.

The features that made MINISIS a success continue to be important to its users. Today, however, MINISIS faces some significant challenges due to: demands for new product developments; changes in the environment for database applications; and the erosion of support from, and links with, the Programs Branch of IDRC. The Centre has missed opportunities for MINISIS in the past because it failed to take decisive action. Centre management must now make decisions about the future of MINISIS. If MINISIS still contributes to the Centre's objectives, significant changes are needed in its management and resources. If MINISIS no longer contributes to the Centre's objectives, care must be taken to safeguard the interests of current MINISIS users.

This evaluation, while recognizing the significant contributions that MINISIS and its staff have made to information management in the Third World over the last 20 years, recommends that the Centre consider winding down its support for MINISIS. It is suggested that the Centre limit support to the completion of current version, make the latest version available for free to all registered users, and explore the feasibility of making MINISIS available as an open-source program to allow future development of the product to take place within the user community.

Irrespective of the decisions that the Centre makes with regard to MINISIS, it is important that these decisions are made now and that they take into consideration the needs of current MINISIS users and are communicated clearly and promptly to the user community.

Introduction

The Centre's interest in automated information management can be traced back to the creation of the Library in 1971. At that time, IDRC was looking for a system for library automation based on international standards and practices for the exchange of bibliographic data. At that time, "the only nonproprietary system that was capable of handling normal library operations ... was the Integrated Set of Information Systems (ISIS) developed by the International Labour Organization (ILO)."[1]

The Information Sciences Division began to use ISIS in 1973. At that time, ISIS was run on a computer in a service bureau linked to terminals in the Centre by telephone lines. By 1975, the Division recognized that significant cost savings could be realized if an investment was made in equipment and programming to transfer this operation to an in-house HP3000 minicomputer. On 1 April 1976, IDRC funded a project to develop this application — MINISIS (a minicomputer version of ISIS).

This move was designed to allow IDRC to keep "abreast of current trends" and to "define an optimum-cost-benefit minicomputer installation that could be offered, complete with programs, for AGRIS/DEVSIS/ISIS activities at national centres in developing countries."[2] The Division also foresaw that other parts of IDRC might benefit from having in-house computer applications: text processing for the Secretary's Office and Division of Publications; processing of financial and administrative data by the Treasurer's Office and the Division of Administration; and statistical and scientific calculations for the various Program Divisions.

At that time, the Division recognized that "we can only speak with confidence where we have direct experience" and the "installation proposed in the project will give us the ability to advise on the basis

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[1] *Arkin, M D. Programmed for success: the story of MINISIS. Report to IDRC. August 1985.*

[2] *Centre project summary (3-P-75-0105).*

of experience."[3] This direct field experience lead to the identification of components that would be critical in a software package that was to be used in libraries and documentation centres throughout the world. The needs for international standards for interagency exchange of information and for a suitable indexing tool (thesaurus) were among the first identified. One of the Centre's initial contributions was to modify ISIS to support a multilingual thesaurus, which allowed retrieval of information without regard to the language in which it was indexed. Other early needs that were identified were the ability to produce specialized bibliographies, a means to provide current awareness services (or selective dissemination of information), and the need for a method to produce more sophisticated indexes.

In his review in 1985, M A Arkin concluded that the relational information system that was developed (originally called FERRIS) "was extraordinary" in "its conformity to the relational model ..., its adherence to the design principles ..., and in the elegance of its execution." This system became know as MINISIS, and although it was to be compatible with ISIS, was designed to extend and improve upon the functions of ISIS.

By January 1978, MINISIS was being used by the IDRC library, and interest was being expressed by other organizations. At that time, several important policy decisions were made. IDRC would maintain the source code, meaning that it would be responsible for future growth and development of MINISIS, and assume responsibility for distribution. By early 1985, there were 124 MINISIS installations on minicomputers, including 63 in developing countries.

In the mid-1980s, it was clear that the microcomputer would be the computer platform of the future, but they were still expensive and lacked the power to run MINISIS. By 1990, computers had dropped in price and become more powerful, and a study was commissioned to assess the position of MINISIS in the environment of the day.[4] The Lolacher report noted the tremendous expansion

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[3] *Centre project summary (3-P-75-0105).*

[4] *Lolacher, A R, A situation analysis of the current MINISIS program. Report to IDRC. November 1990.*

in the number of PC-based database applications (then more than 100),[5] the rapid rate at which software revisions were needed (roughly one per year), and the incompatibility of the "IDRC culture" with "the competitive profit-oriented environment of the MINISIS competitors." An important conclusion of the report was that although MINISIS "makes a tremendous contribution to the developing countries, (it has) missed the window of commercial opportunity."

After presenting four scenarios for IDRC's support to MINISIS (invest, divest, discontinue, or continue), Lolacher recommended that IDRC "continue" to support MINISIS but he recognized that "incremental resources are not available to commercialize the MINISIS product." His recommendation was designed to allow MINISIS to reach the maximum number of developing country users. He suggested two key changes in MINISIS operations: "commercial distributors will officially become a non priority in favor of an exclusive focus on developing country user needs" and "one compatible major partner will be qualified and recruited to complement the IDRC effort in the area of information technology tools. This partner would have the resources and expertise to assist IDRC with implementation of the other three scenarios at a future date." Today, MINISIS has neither a focus exclusively on developing country users nor a major partner for MINISIS development.[6]

Changes within IDRC during the early 1990s, in particular the desire to generate revenue from certain Centre activities, prompted a study of strategies for MINISIS attaining self-sufficiency.[7] The Knoppers study was designed to help develop a preliminary marketing plan for MINISIS. As part of this process, it presented recommendations on: a strategic framework and related policy principles; business goals and operational principles; and the next steps that should be taken to move

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[5] *Since 1990 the number has grown significantly. It was beyond the scope of this study to try to estimate just how many database applications are available today, but MINISIS users reported considering at least 40 different products.*

[6] *According to the notes of 21 January 1993 meeting of the Finance and Audit Committee, IDRC did convene a donor meeting and the President: "assured the meeting that every effort was being expended to secure the financial support of others in this undertaking. He explained that IDRC by itself could not carry the financial burden of producing Version H and disseminating it gratis to LDC institutions."*

[7] *Knoppers, J V T, Beyond MINISIS 2000: Development, marketing, and distribution strategies for attaining self-sufficiency. Report to IDRC. March 1994.*

MINISIS to "self-sufficiency." This report, recommended increased investment in MINISIS at a time when the Centre's budget was being reduced and the Centre was undergoing major restructuring. As recollected by one former senior staff member, "management was not supportive of greater investment in MINISIS" but "rather than make specific decisions, it (MINISIS) was more or less left alone."

Since 1994, the environment in which MINISIS operates has continued its relentless and rapid evolution. For example, the Internet does not appear to have been part of the considerations in any of the earlier studies commissioned on MINISIS. Today, the Internet is foremost in the minds of most computer users. As the MINISIS team has worked to develop the commercial potential of MINISIS and complete the development of version H (now called version 8) for a Windows environment, it has also been stretched to add such necessary features as an integrated web interface and compatibility with emerging standards, such as ODBC[8] compliancy.

Once again, IDRC finds itself asking questions about the place of MINISIS. To help the Centre better understand the current situation of MINISIS, this evaluation presents new information on: views of IDRC staff on the relevance of MINISIS to IDRC programming; user feedback on the positive and negative aspects of MINISIS; and how MINISIS fits within today's environment for software tools used to manage information resources.

The evaluation reconfirms several points raised in the earlier MINISIS studies: MINISIS provided an opportunity for the Centre to gain first-hand knowledge of developing country needs; MINISIS evolved in response to these identified needs; MINISIS was innovative and successful and had features that made it ideally suited to developing country circumstances; MINISIS is situated in a very competitive and rapidly evolving environment; MINISIS has limited resources to respond to changes within this environment; and MINISIS is not likely to be commercially viable. In addition, the evaluation points out that: although MINISIS continues to have features that make it attractive

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[8] *Open Data Base Connectivity. This feature as well as others that users have been asking for are scheduled to be included in the newest version of MINISIS by March 1999.*

to users in both developing and developed countries, users are frustrated by the delays that have occurred in product development; IDRC failed to take clear and decisive action in response to earlier MINISIS studies; the environment for software products has continued to evolve rapidly; and MINISIS has very limited support among Centre staff with an interest in information technologies.

In the past, opportunities to capitalize on the success of MINISIS were missed. Recommendations made in earlier MINISIS studies were not acted upon, and sufficient resources to follow-up on recommendations were not made available. It is important that this not happen again. The Centre needs to be decisive about the future of MINISIS and communicate these decisions to the user community.

Methodology

This evaluation was designed to help IDRC define its future relationship with MINISIS by highlighting some of the issues the Centre must address as it seeks to make decisions about the future of MINISIS. To help ensure that the evaluation would respond to Centre needs, the Director of the Evaluation Unit interviewed members of the Senior Management Committee (SMC) to determine what information they felt they required to make an informed decision about the future of MINISIS. Their suggestions, along with input from the Vice-President Resources and the Director of MINISIS Systems, were used to develop the Terms of Reference (see Appendix E) for this evaluation. The study itself was carried out by an external consultant with several years experience with IDRC.

As described in the Terms of Reference, Centre management wanted to know about: the relevance of MINISIS to the needs of external users; the factors that affect access to MINISIS in developing countries; and the synergy that exists with current Centre programs. Using this information, the evaluator was asked to summarize the advantages and disadvantages of MINISIS to external users (both in South and North); the relevance of MINISIS to IDRC programing; the advantages and disadvantages to MINISIS being housed within IDRC; and the issues that the Centre must address as it seeks to define its future relationship with MINISIS.

Information sources

The primary sources of information for this evaluation were current and past users of MINISIS. The 79 MINISIS users who provided input had, on average, 9.1 years of experience with the software. They represented a range of experience with several versions of MINISIS (the HP 3000 version, the first microcomputer version, and the newest Windows version) from both developing and developed countries. Because MINISIS is used to manage library, archive, and museum collections, to organize records and project information, and to establish inventory management, an effort was made to find informants with experience in each area.

In addition, interviews were conducted with current and former IDRC staff members with expertise in information sciences. A complete list of those who were interviewed is provided in Appendix B. Information was also obtained from MINISIS files, previously completed MINISIS studies, the MINISIS website, Internet searches, and notes and reports previously presented to the SMC and the Board of Governors of IDRC.

Information collection

Face-to-face interviews and an email survey were used to collect information from MINISIS users and IDRC staff. The interview guide and email questionnaire were each pretested twice and revised based on the feedback received (see Appendices C and D). Interviews were conducted at a MINISIS users meeting held at IDRC in early September 1998, at the offices of current and former MINISIS users in Toronto, Hamilton, Oshawa, Ottawa, and Hull (throughout September, October, and November), and at IDRC with current and former staff who had expertise in information sciences. In total, 43 interviews were conducted (6 MINISIS users from developing countries, 22 from developed countries, and 15 current or former staff of IDRC). On average, each interview lasted about 1 hour.

Email surveys were directed to all users for whom valid electronic addresses were available on the MINISIS contacts list. A total of 90 surveys were sent on 26 October 1998 (with replies requested by 6 November). A reminder was sent on 6 November to those who had not yet replied. As of the end of November 1998, replies had been received from 51 current or previous MINISIS users (return rate 57%). Thirty-one respondents were from developing countries and 20 were from developed countries. All those who replied to the survey were sent an email thanking them for their input.

Information analysis

Initially, the survey and interview data were examined separately for developed and developing countries; however, there was little variation in the responses in both the email survey and the interviews. Therefore, the data from both these sources were combined to represent the views of

developed and developing country users. A detailed breakdown of the data from all sources is presented in Appendix A: Findings.

Data were collected on how users learned about MINISIS; the software choices they have available to them[9]; the criteria they applied for software decisions; the sources of information that influenced their decisions; their perceptions about what MINISIS can and cannot do; the influence of MINISIS's association with IDRC; the range of applications for which MINISIS is used; the current and future importance of the World Wide Web (WWW); and user ratings of the technical support provided by MINISIS.

The views of IDRC staff were obtained on their general knowledge about MINISIS; their feelings about the usefulness of MINISIS to IDRC; their understanding of who are MINISIS users; their thoughts on how MINISIS fits into IDRC's current mandate; and their perceptions about future support for MINISIS and the possibility of MINISIS becoming self-financing.

As the data were analyzed, four key groupings emerged that are worthy of discussion: users' perceptions of MINISIS; the changes that have occurred in the "environment" in which MINISIS finds itself; the linkages between MINISIS and IDRC programming; and the type of support needed for a successful software product.

[9] *During the interviews and surveys several other products were mentioned as alternatives to MINISIS, but any comparison of the technical capabilities of MINISIS and these other products was beyond the scope of this evaluation.*

Summary of Findings

This section summarizes the findings of the evaluation[10] in four main areas that IDRC should take into consideration as it makes decisions about its future relationship with MINISIS. These findings were drawn from an analysis of the data from the 94 people who participated in this study and from documentary information. The findings are grouped under four main headings:

- users' perceptions of MINISIS (positive and negative);
- changes in the information technology environment;
- linkages between MINISIS and IDRC programming; and
- capacity to support software development.

Users' perceptions of MINISIS

Positive

When IDRC initiated support for a software tool tailored to the needs of Third World users, it represented a positive development that responded to user needs and anticipated the huge impact that automated information management would have on the world. MINISIS was born, and nurtured, in an environment within IDRC that offered an opportunity to develop a software product that responded to user needs with such features as multilingual thesaurus management, excellent search and retrieval capabilities designed for text-intensive applications, and a database structure that was easy to create and modify to adapt to user requirements. MINISIS was successful in delivering these features at low cost and in a manner that encouraged a cooperative association among MINISIS users (most often referred to as "family") and contributed positively to the reputation of both MINISIS and IDRC.

These same features continue to be seen as the strengths of MINISIS by both developed and developing country users. In particular, users appreciate the ways in which MINISIS can be

[10] *Detailed findings are presented in Appendix A.*

customized to meet their needs.[11] Reasonable cost is also a positive aspect of MINISIS, particularly for Southern users. But several developed country clients have also recently chosen MINISIS because it provides the features they want at a lower cost than other commercial products. Users also continue to value the language capabilities of MINISIS because it provides them with the ability to index and retrieve data in several languages and to use the thesaurus features to translate terms and build multilingual thesauruses.[12]

Interactions of MINISIS staff with users during on-site visits and discussions during MINISIS Users Group Meetings (MUGs) contributed directly to a feeling of closeness (family) within the user community.[13] This close interaction with users set MINISIS aside from commercial vendors and encouraged the development of a library of MINISIS applications contributed by users from around the world. Users in the South and North lamented that budget cuts had necessitated the dropping of MUGs.

Negative

The most common concerns expressed about MINISIS were the slowness of product development and delays in the incorporation of promised features. This has lead to a situation where many users who used to believe that MINISIS was in the forefront of database development now think that it has fallen behind as other products with similar features have become available. The desire for more rapid inclusion of features was common to both developing and developed country users.

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[11] *Users in both developing and developed countries rated "the ability to customize the software to suit their own needs" as the most important consideration when they choose a database application. Cost was the second most important consideration in developing countries.*

[12] *A new multilingual standard (called Unicode) is being developed for web-based products. It is not clear how wide-spread this standard will become, but it is a potentially important initiative. Further development and adoption of Unicode by other software suppliers may reduce the multilingual advantages enjoyed by MINISIS and require MINISIS to ensure compliancy with this standard.*

[13] *The closeness of the user group is reflected in the fact that most users reported that they first heard about MINISIS from colleagues and associates.*

Current concerns among users relate to full implementation of a Windows-based web-enabled product that supports all Windows features. Users also have concerns over when such features as ODBC[14] compliancy, full relational capabilities, a client–server architecture, and a compute function will be fully operational in version 8 of MINISIS.[15] There is clear concern in the user community about the future of MINISIS and the rate and reliability of product development. As a result, several users reported that they were going to take a "wait and see approach" before committing themselves to further use of MINISIS; others have simply decided to adopt other products that could "meet their needs now."

It is not simply the rate of product development that is affecting how MINISIS is perceived. As the number of competing products has grown, several institutions have made a policy decision to adopt "industry standard" products for their information management needs. This not only gives them a sense of confidence in the future of the product, but makes it easier for them to find experienced programmers and applications developers as well as third-party books and reference materials. These resources are much more scarce for products such as MINISIS, which have a small share of the market. Not only have organizations started to move to "industry standard" products, they have also tended to migrate all their databases applications on a single platform to avoid the need to have "expertise in more than one product." In such cases, the opportunity to use MINISIS as a "secondary" product has also been reduced and some users have reluctantly left MINISIS and moved to other products. In the words of one Third World user: "we have very limited human resources so it is difficult to put effort into more than one library package, so we decided to put all of our effort into the one that was most complete (included a circulation module and could create MARC records)."

There is also a perception that MINISIS lacks sufficient human and financial resources to keep pace with evolving technologies (as evidenced by delays in product releases), although there is

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[14] *Open Data Base Connectivity.*

[15] *Several of these features are scheduled for inclusion in MINISIS by March 1999, but users continue to express concerns over whether deadlines will be met.*

recognition of the amount and quality of work that has been done by the small MINISIS team. As well, some users felt they had recently been "ignored" by MINISIS and wonder, therefore, if MINISIS had enough staff to both develop new products and service clients.

Changes in information technology environment

The world of information and communication has changed rapidly and enormously during the 23 years in which IDRC has nurtured MINISIS. Although MINISIS was in 1976 a ground-breaking application for which there was great need in the developing world, the situation is now radically different as users have many more choices of commercially available software.

MINISIS now finds itself in a very competitive environment and is being compared with, and evaluated against, a host of other products. Users in Africa, Asia, Latin America, Europe, and North America reported that, in total, they had considered more than 40 other applications for their needs. This list included: common database products such as Access and FoxPro; fully integrated library automation systems such as DB/TextWorks (InMagic), DOBIS/LIBIS, DRA, and VTLS; archive packages such as GenCat and CAIRS (which also has library and records management modules); and large "all-purpose" information management suites produced by companies such as Oracle, GEAC, and Sybase.[16]

Cost will continue to be an important consideration for some users, and because MINISIS is no longer free, some of the poorest organizations may no longer be able to afford MINISIS. There may also be reluctance among some users of the old version to pay for the upgrade because they have received MINISIS for free in the past. Several Third World users reported that because it is free they are now considering CDS ISIS, even though it may not have all of the same features as MINISIS.[17] Competition is also increasing as some commercial software products are starting to make in-roads into developing countries. For example, a MINISIS distributor in Asia reported that "many small

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[16] *In 1990, Lolacher noted that there had been a rapid expansion in PC-based database applications (then more than 100); it is difficult to estimate how many might be available almost 10 years later but clearly the choice is broad.*

[17] *A Windows-based version of CDS ISIS is being developed, but this study was unable to determine its current status.*

libraries are now using SLIM." In at least one case, a vendor is making a version of their library automation and information management software (InMagic) available for free.[18]

With the global spread of electronic communications and the increasing "connectivity" of many Third World organizations, access to software products and information about them has increased rapidly. As a result, access may be becoming less of an issue and the timely development of features more crucial. The comments of some Third World users illustrate this: "unfortunately MINISIS development was not able to synchronize with the emergence of information technologies appropriate for developing countries, which forced us to develop our own solution" and "the market is getting more competitive, and there is much more choice available ... we will look for one (software) that is moving in tandem with developments on the Net and provides interfaces to services provided via the Internet."

Linkages between MINISIS and IDRC Programming

When MINISIS was created it was a significant development that responded to a defined need for a tool to manage information resources in the Third World. Consequently, there was a synergy between MINISIS and IDRC that contributed to the Centre's image in the field of information sciences, gave IDRC staff an opportunity to develop a deeper appreciation for the constraints faced by users in the South, and provided software support to automate the Centre's library.

Some synergy remains between MINISIS and IDRC. The Centre provides a degree of credibility for MINISIS. In some cases, MINISIS would not have been considered by potential users had it not been part of the Centre because it would have been viewed as a start-up company. Some users also prefer to deal with IDRC and MINISIS because of the concern these organizations have demonstrated for user needs and the fact that MINISIS takes a less "commercial" approach. Development organizations prefer to collaborate with IDRC and MINISIS because they share their own "philosophy " toward development activities and projects.

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[18] *InMagic (http://www.inmagic.com/) allows free downloads of its DOS product but charges for the Windows product DB/TextWorks. One developed-country user described InMagic as "prepackaged, easy to use, very flexible, but with limited relational capabilities."*

However, the most striking observation arising from this evaluation is that with the restructuring of IDRC and the shift of MINISIS to the Resources Branch, there has been a virtual divorce of MINISIS from the program activities of the Centre. Today, just two Centre projects[19] use MINISIS. Internally, it is only within the library that MINISIS is used on an on-going basis. The library has used MINISIS since 1978 and is currently investing $200,000 to convert its current operations to a new system based on MINISIS.[20] MINISIS is not used for overall information management at IDRC, and future prospects are dim now that the Centre has adopted Oracle as its corporate database application.

There are several reasons why MINISIS has few links with IDRC programming. First, there is almost no contact between MINISIS staff and IDRC program staff. Because MINISIS has not marketed itself within the Centre, the program officers who were interviewed reported that they either knew little about MINISIS or had to go out of their way to learn about MINISIS. Only the program staff who were part of the old Information Sciences Division knew much about the history or use of MINISIS.

Second, program staff question whether MINISIS fits within the Centre's current program objectives. With recent changes in IDRC, program staff feel the Centre is no longer supporting technology research, and that even within the information programs that remain, the focus is on issues such as connectivity and policy, i.e., use not content. Program officers are now focused on Internet-based information management, and even those with a long association with MINISIS do not feel that MINISIS has kept up with developments in technology.[21] Therefore, they rarely consider MINISIS for their program activities and are, instead, opting for web-based database applications based on such products as Microsoft Access and Cold Fusion.

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[19] *Only one Program Officer reported that any of his projects were using MINISIS (one project in Latin America and one in India). He also suggested that PAN Asia consider MINISIS, but project personnel decided to opt for Informix instead (at a cost of $70,000).*

[20] *A study by R Davies, Needs assessment for library-related systems for RIMS, IDRC (May 1997) was commissioned to evaluate MINISIS version 8 and its suitability for library functions; the acquisition of a commercially available library management system was not part of the terms of reference of the study.*

[21] *Due, they believe, to a lack of sufficient investment in MINISIS at a critical time during its development.*

As the Centre's program priorities have shifted, MINISIS has lost the services of IDRC program officers to provide product introductions.[22] This loss has been compounded by the reduced amount of contact that MINISIS staff have with Third World users (for example, through MINISIS users group meetings), which has diminished the "family" feel that users had come to expect from MINISIS.

Changing priorities within the Centre over the last few years have forced MINISIS to shift from its original focus on developing country clients. The requirement to commercialize the software brought with it a need to generate revenue through increased sales. This led to a decision to charge all users for the software (at a heavily discounted rated in the South) and also meant that more effort was needed to market MINISIS to a broader range of potential paying customers, mostly located in the North. As a result, limited financial and human resources had to be spread over more tasks.[23] The decision to commercialize MINISIS also placed it in a very competitive market with a much broader range of products that had the resources needed to react to a changing environment that demanded the rapid development of such features as Windows-based products and web interfaces. It appears MINISIS was asked to meet this challenge with insufficient resources for the job.

Support needed for software development

Software development requires continual and substantial support for human resources to write and revise the code and for operational activities such as marketing and technical support. It must also take place in an environment in which decisions can be made rapidly and resources reallocated as necessary to respond quickly to market changes. The Centre is not a commercial enterprise, has had limited experience in bringing products to market, and does not provide an entrepreneurial environment. Although earlier studies suggested the need for additional resources to make MINISIS commercially viable, the timing was poor because the Centre as a whole was facing budget reductions. Therefore, MINISIS may have missed an opportunity for commercial success when it

[22] *Developing country users reported that IDRC staff and MINISIS staff were equally important sources of their first contact with the software.*

[23] *It is not clear what affect this commercial push has had on marketing of MINISIS in the Third World because figures are not available to indicate how many developing-country organizations have recently installed MINISIS.*

had a "competitive advantage" over other products. In the interim, these other products have evolved more quickly and developed new versions of their software.

The delays in product development experienced by MINISIS can, at least in part, be attributed to limitations on financial and human resources. A large investment of both time and resources is needed to bring a product such as MINISIS to market and continue to evolve the product to meet user needs and new developments within the market. In fact, several people stated that it was amazing that MINISIS had been able to accomplish as much as it had with such a small staff and limited budget.

In the past, MINISIS was recognized for its contribution to the Centre's program objectives. As a result, MINISIS staff were given the opportunity to develop the software within an environment that fostered and encouraged the creation of a product designed specifically to meet the needs of Third World users. Today, Centre staff openly question why IDRC continues to support the development of MINISIS. Program staff do not see MINISIS as being useful to their program activities and believe that database development should be left to commercial companies. There is no longer a supportive environment within IDRC for MINISIS.

Conclusions

This section reviews three broad issues IDRC should consider as it seeks to define its future relationship with MINISIS. For each issue, several related points are examined to encourage broad and complete discussion of the choices the Centre must make. These issues should be considered in the context of the successes that MINISIS has had. The Centre was foresighted when it developed MINISIS because it anticipated the impact that automated information management would have on the world. MINISIS and IDRC provided each other with direct experience in the problems Third World users face in information management. As a result, MINISIS delivered an effective, unique software product designed specifically for the needs of developing countries. The discussion that follows suggests that several factors have changed and that the Centre needs to make some important decisions about the future of MINISIS.

Impact on MINISIS of changes in the information technology environment

Many changes have occurred in information technology over the last decade. The three changes that have had the greatest impact on MINISIS are: the rapid expansion in the number of software products that are now available to manage information resources; the ever-increasing impact of Internet technologies and the need for software to be compatible with evolving Internet standards; and the growing reduction in the "difference" between North and South in terms of their access to information and their software requirements.

Need for an accessible information-management tool

When MINISIS was initially developed there is evidence that there was a demonstrated need for a tool tailored to the Third World. Today, this need is less obvious because many other tools are available and are being considered by Third World users. Although there is still clearly a need to better manage information resources in the South and one of the people interviewed quoted the World Bank as stating that "development can only be achieved by the acquisition, repackaging, and dissemination of knowledge and information," the software landscape is markedly different now than when MINISIS was first developed.

A secondary consideration is whether in the current environment it is more prudent to develop software or to purchase it as required. This might be thought of as a "make or buy" decision. Two factors were identified in this evaluation that affect this decision. First, to be viable, software must be continually developed and supported, which requires some guarantee that on-going funding will be available. Second, if Centre activities require the type of software support provided by MINISIS, the choice of product ought to be determined by the recipients based on the defined needs of the project. Product selection in today's software market is very broad, which suggests that when software is needed to support Centre programming, the "buy" option may be the most attractive in the long-term.

Cost may limit the access of certain users to the software tools they need, and there may be a niche for a product that is able to deal with the multilingual requirements and special character sets used in such regions of the world as the Middle East and parts of Asia. However, it appears that other products on the market can also offer some of these features and that MINISIS may have lost some of the advantages it once enjoyed.

Relevance of MINISIS to IDRC programming

Centre staff tend to feel that MINISIS no longer fits within Centre priorities because the Centre is no longer supporting technology research, and existing information programs now focus on connectivity and policy. Two points need to be considered. The first is the "fit" of MINISIS to the Centre's mandate and the second is the complementarity of MINISIS to the Centre's current program priorities.

Information management and IDRC mission

IDRC was created "to help researchers and communities in the developing world find solutions to their social, economic, and environmental problems. IDRC connects people, institutions, and ideas to ensure that the results of the research it supports and the knowledge that research generates, are shared equitably among all its partners, North and South."[24] This suggests that support for a tool to

[24] *As quoted from the IDRC website.*

improve information management (in this case, MINISIS) contributes to the principle business of IDRC by helping ensure that knowledge can be "equitably shared among all its partners, North and South."

In-house development of a software tool

A related issue is whether IDRC should (or can afford to) support the development of such a software tool even if it does fall within the Centre's mission. While it is clear that software tools are needed, the question is whether such a tool should be developed in-house. Many more software companies are now developing information management products. Their ability to respond quickly to changing market requirements depends on a steady flow of resources. MINISIS does not generate sufficient resources on its own, therefore, the Centre would need to be prepared to make a long-term commitment of resources to software development.

Complementarity of MINISIS and IDRC programming

MINISIS was initially housed within the Information Sciences Division and benefitted from a degree of synergy with on-going program activities of that division as well as some opportunities to install MINISIS in organizations that were hosts of other Centre projects. Over the past 10 years there has been a decrease in the synergy that existed between MINISIS and IDRC programming. Whatever program links might have existed have been lost with the transfer of MINISIS to the Resources Branch. There is now little contact between Centre staff and MINISIS staff and only two current Centre projects use MINISIS. Because the Centre's program priorities within the information sector now place emphasis on connectivity and policy, there is some question as to whether IDRC should continue to be involved in the development of an information management tool. Without some links to Centre programming, continued support for MINISIS may be difficult to justify unless a substantial case can be made to demonstrate either a Third World niche that is not being filled by any other product or the inability of users to acquire other products and migrate their data.

Considerations for MINISIS development

Software needs continual evolution and development to remain current. If MINISIS is to remain responsive to its users, it will require on-going support to respond to its users' changing needs and to develop new features. Decisions about future funding to MINISIS should consider the following points. Several of these points have been raised in earlier studies of MINISIS. The Centre needs to face the challenge of having to take decisive action about the future of MINISIS.

Duration of support

Given the extent of investment the Centre has had in MINISIS, and the progress that has already been made, it seems reasonable that support should be continued to allow the current version (8) of MINISIS to be completed. Efforts should also be funded to ensure that current users receive the final version of the product. With the new features that are being included, these users should be able to use the product to manage their information resources for several years.[25] The evaluation raises questions as to whether support for MINISIS development should be extended beyond the completion of version 8. If support beyond the current version is endorsed, the Centre must be prepared to make an on-going long-term commitment to MINISIS.

Extent of investment

If the Centre decides to fund further MINISIS development, it must commit sufficient resources to this activity. In the past, MINISIS may have evolved more slowly than its clients expected because it did not have the human or financial resources to commit to problem solving or to product development. If MINISIS is to receive further support, investment must be at a level that minimizes these delays in product development.

Audience

If further MINISIS development is to be supported, a decision is needed as to whether MINISIS should return to its original focus on the Third World or continue to cater to a global clientele. It

[25] *If funds are not provided to complete work on version 8, it is still important to safeguard the data of current MINISIS users and, if necessary, to help them migrate their data to other products.*

appears that MINISIS may have a niche in the Third World, particularly in some Arabic countries and parts of Asia where its multilingual capabilities can be used to greatest advantage. MINISIS may also face less competition from commercial products in parts of these two markets.

Cost recovery

In the past, MINISIS has been challenged to both recover a percentage of its costs and to generate revenue for the Centre. The level of cost-recovery that is feasible is influenced by the earlier consideration of for whom MINISIS is to be developed. A focus on the South would likely mean that MINISIS could at best recover only part of its cost. A more global focus might allow MINISIS to recover more of its costs, but would place it in direct competition with large commercial companies and by necessity force it to cater to clients who can best afford to pay commercial rates for their software. A modest level of cost recovery would likely be the most realistic goal for MINISIS.

Current obligations

If the Centre changes its level of support or the mandate of MINISIS, it will need to examine MINISIS's on-going contractual agreements. MINISIS has agreements with several other organizations (e.g., the University of Ottawa and the Archives of Ontario) for joint development of applications. The contractual obligations of the Centre in these situations, in its current user licences, and in technical support agreements would need to be reviewed. The Centre may also have some "moral" obligations to MINISIS users and may wish to provide some support to help these users move to other software products (although the completed version 8 should meet their current needs).

Impact on Centre library

If the Centre decides to reduce its level of support for MINISIS, the impact this will have on the library will have to be determined. Development of the library module could presumably continue and be used for several years as a stand-alone application. However, close consultation with the library would be needed to ensure library services are not disrupted.

Adverse publicity

In the past, the Centre has gained considerable "public affairs" benefits in the Third World from MINISIS — several users pointed out that MINISIS was one way that many people first heard about IDRC and that it gave the Centre credibility and a good reputation. Any move by the Centre to wind down support for MINISIS may be associated with some negative reaction. IDRC will need to be prepared to publically explain its decision and inform all current users of its future plans.

Decisive action needed

Previous studies of MINISIS made several recommendations, i.e., that additional resources be directed to MINISIS and that efforts be made to find a commercial partner. The Centre and/or MINISIS did not heed these recommendations and, as a result, MINISIS may have missed any opportunity it had for commercial success. It may even have lost some of its Third World market. Irrespective of the decisions IDRC now chooses to make with regard to MINISIS, two things are clear: there is a need to be decisive and to provide sufficient resources to ensure that necessary follow-up can be effectively implemented; and these decisions must be clearly and promptly communicated to allay any concerns that exist in the user community about the future course of MINISIS development. The user community as well as MINISIS staff must know what the future holds.

Options for the future

Several possible scenarios could be considered for IDRC's future relationship with MINISIS.

1. **Continue on an "as is" basis**

   This is not likely to be very successful in the long-term. Under the current arrangements resources appear to be spread too thin and this has resulted in product delays, customer dissatisfaction with product development, and a lack of program links with the rest of the Centre.

2. **Provide a significant influx of resources**

   This might make MINISIS more competitive and thus help generate revenue for the Centre, launch MINISIS as a commercial venture, or demonstrate the viability of MINISIS to an outside

commercial company in hopes of attracting an outside investor. As has been suggested in earlier studies, it is likely too late to consider this option.

3. **Refocus MINISIS as a product tailored to Third World needs**

   MINISIS could cater exclusively to the Third World and perhaps be limited to regions where its multilingual capability gives it its greatest advantage. This option would allow MINISIS to continue to develop the product to serve its "primary"clients in developing countries, but would not preclude joint development activities with Northern users or "incidental" sales. However, it is not clear whether such an option is feasible in today's software environment in which users throughout the world seem to want to move to "industry standard" products and to consolidate all their database needs on a single piece of software. Additional market research would be needed if this option was to be pursued.

4. **Create a MINISIS consortium**

   IDRC and MINISIS might wish to coordinate a group of donors who would receive copies of MINISIS and on-going product support for their development projects in return for core support for MINISIS. This would split the cost of further MINISIS development among several donors and help establish program links between MINISIS and the program activities in IDRC and other donor organizations. However, this option would require considerable work and time to orchestrate.

5. **Sell MINISIS**

   The Centre could sell (or even give) the software to one or more Third World companies (perhaps the current distributors) to allow them to continue to develop and support the product in their markets. To support these efforts perhaps a "project type" modality could be developed to provide marketing and software development assistance for 1–2 years. In this case, it would need to be clear that this was one-time-only support and that after this time MINISIS would no longer receive Centre funding.

6. Open source

The Centre might consider the possibility of "giving MINISIS to the world." One of the earliest policy decisions made by the Centre with regard to MINISIS was to retain rights to the source code. With this decision came the responsibility for future development and distribution of the software. The Centre could explore the feasibility of making MINISIS an "open source" program.[26] This would end its commercial potential, but would make MINISIS software code available to programmers throughout the world. These software developers would then be free to develop new features and applications but would be obligated under the licencing agreement to make such enhancements (and their code) freely available. Users themselves would then become responsible for product developments.

[26] *Additional details on this concept are available at www.opensource.org.*

Recommendations

MINISIS has been successful in responding to Third World needs since it was first funded by the Centre in 1976. However, a combination of internal and external factors have more recently raised questions about the type of relationship the Centre should have with MINISIS. Several times in the past the Centre has raised questions about MINISIS. Overall, most recommendations of previous studies have not been implemented.

This evaluation finds that the features that made MINISIS a success continue to be important to its users; however, there are problems with the current MINISIS situation. Delays in product development have created uncertainty in the user community; changes in the information technology environment have made many more products available and created an ongoing need for MINISIS to be more frequently modified to meet evolving Internet standards; and MINISIS enjoys little support and has few links with the Programs Branch of IDRC.

It is time for Centre management to be decisive about the future of MINISIS. If it continues to be part of IDRC, significant changes are needed in MINISIS's mandate and resources. If the Centre decides to no longer support MINISIS, then care must be taken to safeguard the interests of current MINISIS users while support is wound down. Several points are raised in the conclusions section to help guide this discussion.

This evaluation confirms the significant contributions that MINISIS and its staff have made to information management in the Third World. However, the Centre's program priorities appear to have changed, and the on-going expansion in the introduction of new technologies and software products can be expected to continue to erode the advantages that MINISIS once provided. Recent experience also suggests that IDRC is not an ideal venue in which to support on-going software development. Therefore, it appears that it may be time for the Centre to celebrate the contributions that have been made by MINISIS and to take steps to bring to a close the long-term support it has provided to MINISIS.

Developing Country Input

A total of 31 email responses was received from past and current MINISIS users from the South. In addition, interviews were conducted with 6 Southern users who attended the MINISIS users meeting in Ottawa in September 1998. On average, the respondents to the email questionnaire had 10.8 years of personal experience with MINISIS (range 1 to 18 years) and the institutions in which they worked had used MINISIS for about the same average amount of time (11.0 years, range 1 to 18 years). Those individuals interviewed in Ottawa had less experience with MINISIS (both personal and institutional experience averaged 6.8 years and ranged between 0 and 13 years). Input was received from a range of MINISIS users from Brazil, China, Egypt, El Salvador, Ethiopia, India, Jordan, Kenya, Malaysia, Morocco, Palestine, Philippines, Saudi Arabia, Singapore, Sudan, Syria, Taiwan, and Trinidad. Information from the email survey and the interviews has been combined.

How users learned about MINISIS

Users in the South reported that they most often first heard about MINISIS from colleagues and associates (15) (Table 1).[27] This was followed by MINISIS staff and IDRC staff (both 7) and information obtained at meetings and seminars (6). Other initial points of contact with MINISIS were UNESCO referrals (2), ALDOC (2), a UNDP consultant, and an HP distributor.

Although the average experience of the users who were interviewed was only 6.8 years, some had been associated with MINISIS for a long time. In one case, the association dated back to an IDRC project in 1977, in a second case to school studies in 1982, and in a third case to research that was done in 1986 to identify a suitable software product. One person who was interviewed had undertaken CDS ISIS training but had just heard about the Windows version of MINISIS and decided to learn more about its use prior to making his final decision on software choice. The MINISIS meeting in Ottawa was a first opportunity to learn about the product.

Software Choices

When these Southern users were making their decisions about the software to use for their information management needs, they reported that they considered a fairly broad range of products. Understandably, given that these were current or past users, MINISIS was the most often cited software (12), followed by Oracle (6), FoxPro (5), and Access (3) (Table 2). In the "other" category, CDS ISIS was mentioned 7 times. Other products that were considered included: Basic and other products developed in-house, BestSeller (which is Canadian), CDS ISIS, DBase, DOBIS/LIBIS, Horizon (Arabic company), Horizon Online Public Access Catalog, Ingris, InMagic, INNOPAC, TLC by Library Corp. called Library Solution, and VTLS.

[27] *Totals do not match the total number of responses received because not all respondents answered all questions.*

Table 1: Source of first contact with MINISIS (figures represent the total number of all respondents selecting each choice).

	MINISIS staff	IDRC project	Colleagues/ associates	Meeting/ seminar	Product review	Brochure/ advertisement	Other[a]
Developing Countries	7	7	15	6	2	2	12
Developed Countries	4	0	18	2	2	0	9
Total	11	7	33	8	4	2	21

[a] Included in the "other" category in developing countries were: ALDOC, HP computer distributor, professional literature, UNDP consultant in China, and UNESCO. In developed countries "other" included: demonstration from MINISIS, feasibility study, ICOD, March 97 review by CWHN, Quixis (Willoughby Assoc.), response to an RFP, and MINISIS was here when I arrived.

Table 2: Other products considered (figures represent the total number of respondents who indicted that they had considered the particular product).[a]

	Access	FoxPro	Informix	MINISIS	Oracle	Paradox	Other
Developing Countries	3	5	2	12	6	1	15
Developed Countries	7	3	0	13	4	1	23
Total	10	8	2	25	10	2	38

[a] Included in the "other" category in developing countries were: Basic and other products developed in-house, BestSeller, CDS ISIS, DBase, DOBIS/LIBIS, Horizon (Arabic company), Horizon Online Public Access Catalog, Ingris, InMagic, INNOPAC, TLC by Library Corp. called Library Solution, and VTLS. In developed countries "other" included: Adhoc, ADLIB, Basis, BRS Search, C2, CAIRS, DBase, DB/TextWorks, DOBIS/LIBIS, Embark, FileMaker Pro, Foremost or Rims, Fulcrum, GEAC, GenCat, Grandview, Heritage, ILS (Integrated Library System), InMagic, Lotus Notes, PICA, Quadra Star, Quixis, Registar, Retreivalware, Sybase, SQL Server, Thesaurus Construction System, and Trim.

When asked what software they were currently using (if not MINISIS), three respondents reported that they were now using CDS ISIS. Among the reasons for using CDS ISIS were: cost; ease of use; availability of off-the-shelf applications; its customizability; the availability of technical support; the fact that it is available in several platforms (DOS, Windows, and UNIX), and that it is "open for

programmers." Two respondents now use FoxPro, one said because "it is compatible with existing xbase applications." One user who uses DOBIS/LIBIS selected it because "it was the only package available in the region that could run on the existing IBM mainframe setup," another selected Oracle because "the majority of the faculty wanted it."

Criteria for selection

Southern users were asked to rate on a scale of 1 to 5 (with 1 being very important and 5 being not important), the relative importance they placed on ten criteria that might affect their choice of software product (Table 3). The ability to customize the software was rated most highly (1.7). This was followed by cost (1.9), multilingual capability and ease of use (both 2.0), and technical support and availability of Windows version (both 2.1). Availability of off-the-shelf applications was rated the lowest (2.6) of the ten criteria.[28]

During the interviews, a little more information on reasons for making selections was gathered. Interestingly, only one person rated multilingual capability as "very important." Cost continues to be important, but this aspect appears to vary between regions. Users in the South are increasingly concerned with the features offered by the software they select. One user noted that "the Committee for Higher Education in Jordan recommended Oracle for the library, but Oracle doesn't handle Arabic characters and we have about four gigabytes of records." His concern was more with features than cost. He would like to use MINISIS because "its search techniques are better and it has multilingual capability." But to be useful in this situation, "MINISIS needs to develop a gateway to Oracle databases because most databases at the University were migrated to Oracle about two years ago." Another user noted that the software is reasonably priced; whereas, another, still using the HP version of the software, pointed out that "although the software was inexpensive, the HP computer system was very expensive."

Table 3: Factors affecting choice of software product [rated in importance from 1 (very important) to 5 (not important)]. Values are averages of all responses received in each category.

	Cost[a]	Ease	Apps	Cust	Tech S	MultiL	PC	Win	WWW	MultiM
Developing Countries	1.9	2.0	2.6	1.7	2.1	2.0	2.3	2.1	2.3	2.4
Developed Countries	2.3	1.9	2.7	1.8	2.0	2.4	2.1	1.8	2.0	2.8

[a] Abbreviations used: Cost cost; Ease ease of use; Apps availability of "off-the-shelf" applications; Cust ability to customize the software to suit own needs; Tech S technical support; MultiL multilingual capability; PC availability on a PC-based platform; Win availability of Windows version; MultiM multi-media capability; WWW availability of World Wide Web interface; LDC developing countries; and DC developed countries.

[28] *Differences between ratings are small and should be interpreted to indicate only "relative importance."*

Table 4: Most important sources of information when making software choice [rated in importance from 1 (very important) to 5 (not important)]. Values are averages of all responses received in each category.

	Sales reps	Colleagues/ associates	Meeting/ seminar	Product reviews	Brochure/ Advertisement	Hands-on demo
Developing Countries	3.3	1.9	2.0	2.0	2.6	2.0
Developed Countries	2.3	2.4	3.1	2.6	3.4	1.8

Sources of information

When they were forming their opinions about the software to choose, Southern respondents rated (on a scale of 1 to 5) colleagues and associates as being the most important (1.9) (Table 4). This was followed closely by hands-on demonstrations, meetings and seminars, and product reviews (all 2.0). Sales representatives were considered to be the least important sources of information (3.3). Two respondents mentioned that seeing the implementations and discussing the experiences of other users in the region were also very important.

When asked to state the primary reason they chose MINISIS, users in the South replied most often that it was cost and the fact that MINISIS suited their needs (6 times each). This was followed in importance by multilingual capability (5 times) and the fact that MINISIS was used by other similar organizations (2 times). During the interviews, the "family" aspect of MINISIS was mentioned by two users. In this regard, it was noted that many organizations are involved in evolving the system; that many users contribute to product development, which gives more human resources for development of new application; and that it is good to be able to exchange experiences with others, for example at MINISIS user group meetings.

Some of their comments help illustrate their reasons for choosing MINISIS: "the software responds to our information processing (needs), ... was used by many national libraries, ... and the software was free"; "MINISIS gave us the ability to automate our work with less effort"; "suits our needs, ease of use, cost"; "cost, stability, multilingual"; "its compatibility with the software used by similar organizations"; "MINISIS is aimed at library usage; whereas, other products are more general", and that "MINISIS is a text-based relational database."

What MINISIS can and cannot do

Respondents were asked if, in their experience, MINISIS could do things that other products could not do. In the opinion of 21 respondents, MINISIS can do things other products cannot; whereas, 4 said it could not, and 8 said they did not know. The most often mentioned unique characteristics of MINISIS were its thesaurus and multilingual capabilities (each referred to 8 times). Responses related to field length and repeatable fields and subfields were mentioned 5 times. Among the comments made, these two capture the importance placed on the language capabilities of MINISIS:

Table 5: Users rating of the ability of MINISIS to meet their current information management needs [rating scale of 1 (very well) to 5 (not well) with figures represent the total number of respondents selecting each choice].

	One	Two	Three	Four	Five
Developing Countries	11	10	3	0	1
Developed Countries	8	7	7	3	3
Total	19	17	10	3	4

Table 6: Applications users reported to be running using MINISIS (figures represent the total number of respondents selecting each choice).

	Archives[a]	Library	Museum	Records	Project	Inventory	Other
Developing Countries	3	19	0	8	5	0	7
Developed Countries	12	15	2	12	11	4	7
Total	15	34	2	20	16	4	14

[a] Abbreviations used: Archives archive management; Library library management; Museum museum management; Records records management; Project project information management; Inventory inventory management; and Other others.

"It (MINISIS) is fully bilingual and this is very important for my work, since my organization is bilingual and the training we offer is given in both languages and the data we manipulate is also in both French and English ... thesaurus maintenance (and the translation of terms) was another good feature." "(We are able to) build multilingual thesauruses in a professional way and link the databases in many ways with less effort, (which made it possible) to standardize the data with zero errors and manage the databases with less effort."

The respondents were also asked if there were things that MINISIS is unable to do that other products can do. In total, 17 people said yes, 7 said no, and 8 reported that they did not know. The most common complaint was that the computation function and management of statistical information needed improvement (5 times). Others suggested that MINISIS needed a graphical user interface (4 times), that there was a need to improve the format of reports (3 times), and that

MINISIS was not ODBC compliant (2 times). Mentioned by single users were: that the PC version no longer supports SDI (selective dissemination of information); that you cannot lock fields to make data more secure; that MINISIS is not available for a client-server architecture; that the editor is weak and too complex; a circulation module is needed; and that the implementation of the web interface is awaited in the most recent version.

In terms of meeting their current information management needs, respondents were asked to rate MINISIS on a scale of 1 to 5 (with 1 representing "very well" and 5 representing "not well") (Table 5). In total, 11 users rated MINISIS as (1), 10 rated it as (2), 3 rated it as (3), and one gave a rating of (5). The person giving the rating of three indicated that version G is able to meet about 60% of current requirements, and that he is looking to the new version 8 to be able to keep up with Internet technologies. He then hopes MINISIS will meet 90% of his needs.

Association with IDRC

Users were also asked whether the fact that MINISIS was associated with IDRC influenced their decision to use the software. Of the respondents from the South, 15 said yes, 9 said no, and 4 did not know. Some of the positive comments related to the association of MINISIS with IDRC were: "I am completely sure that all our questions and technical problems will be replied and will never be ignored." "The software was given to us for free by IDRC." "The software was developed and supported by IDRC made us feel we could depend on it." During the interviews, three users mentioned that IDRC was a non-profit organization that shared their "philosophy". One user mentioned that it was also a reason to stay with MINISIS because of its long-term viability; however, on the negative side, another user reported that he was being cautious "because of the rumors about IDRC finances, we have some concern about the future of IDRC, and by extension MINISIS."

MINISIS applications

Asked about what applications they were running using MINISIS, email respondents from the South most often reported that they use the software for library management (19) (Table 6). The next most common use was for records management (8), project information management (5), and for archives (3). Under the category of "other", developing a multilingual thesaurus was cited by 3 users, management of mailing lists was mentioned by 2 respondents, and one mentioned Xerox service management.

WWW

When questioned about the World Wide Web (WWW) and the Internet, 8 Southern respondents said they were using MINISIS to provide WWW access to their data; whereas, 19 said they were not. However, virtually all respondents rated (on a scale of 1 to 5) the future importance of WWW usage of MINISIS to be 1 (18 of 21, with one person providing a rating of 2 and two a rating of 3) (Table 7). Users in the South are also optimistic that MINISIS will be able to meet their future needs with respect to the WWW, with 17 respondents saying yes and 8 saying they did not know. None said no. (Although they are very positive about future web usage, in many cases this is an activity for the future because their WWW interface is not yet established.) One user not currently using the web interface, pointed out that 80 government organizations in his country subscribe to various

the web interface and multimedia capability, and that they wanted to have a gateway between MINISIS and other databases (especially Oracle).

Other comments

Asked about what else they might have to add, several interesting comments were provided. The most common comment was with regard to the need for more prompt fixing of bugs and the slowness with which developments have taken place in MINISIS. These comments ranged from requests to "just be quicker in completing the development of the present application" to "unfortunately MINISIS development was not able to synchronize with the emergence of information technologies appropriated to developing countries, which forced us to develop our own solution." Another user went as far as to say that MINISIS has missed many opportunities in Third World libraries because of the delays that had occurred in delivering promised features such as modules for circulation and acquisitions. Some competing products being used in Asia include LIBSYS, which was reported to "be expensive but used by many libraries", CDS ISIS, "used by some libraries with less money", and SLIM, which is "used by small libraries."

Users are anxiously looking forward to further development of the Widows versions of web-enabled software: "The market is getting more competitive now and there is much more choice available. If we do move over to a new system we will look for one that is moving in tandem with developments on the Net and provide interfaces to services provided via the Internet." One Third World distributor of MINISIS reported that feedback from his clients indicated that "computation/analysis and ODBC capabilities are really in need."

In the words of one respondent "We have not implemented MINISIS version 8 because of the difficulty in creating MARC records ... in addition we needed circulation and that was not ready (is it ready now?) so we looked elsewhere. We have very limited human resources so it is difficult to put effort into more than one library package so we decided to put all of our effort into the one that was most complete at the time."

One respondent pointed out that "I understand that the MINISIS team should work on a cost recovery basis. And, as we all know agriculture libraries in developing countries in particular have limited resources and almost all of them are asked to provide services free of charge. And, due to the fact that many of these libraries/information centers were founded by grants from IDRC, I see here a moral commitment on IDRC's behalf to make their products available to these libraries at a marginal cost to allow them to upgrade their systems and use the various modules (M2L and the Web Interface)."

An Arabic user suggested that MINISIS's future was positive in his region: "the number of institution using this product in our region is over 100 institutions. After releasing the Arabic version of MINISIS under Windows we expect the number will increase dramatically ... we trust IDRC to continue its contribution and support to its users in the Arab regions who trust IDRC."

One of the strong sides of MINISIS was said to be the involvement of many users in product development, which had helped develop a "family" feel within the user community in the past. Two

of these users hoped that IDRC would provide MINISIS with more resources to help it better meet its obligations for product development.

Specific technical requirements that were mentioned included the need for gateways, which make it much easier to deal with other software, and the need for better documentation for such things as "user exits". With respect to data conversion, one user reported that the conversion from version G to 8 was "OK, it was not smooth, it was not a piece of cake". It took about a year to convert all of their records (30,000 documents, 50–50 Arabic and English).

Developed Country Input

A total of 20 email replies were received from current and past users in developed countries. Responses were received from Canada, France, Greece, Sweden, The Netherlands, the United States, and the United Kingdom. On average, these users had 8.3 years of personal experience with MINISIS (range 1 to 18 years), and their institutions had used MINISIS for an average of 9.9 years (range 1 to 18 years). In addition, 22 current and past users of MINISIS were interviewed. On average they had 8.4 years of experience with the software (range 1 to 22 years), and their institutions 10.1 years (1 to 22 years). Information from the email survey and the interviews has been combined.

How users learned about MINISIS

Northern users, just like those in the South, had most often first heard of MINISIS from colleagues and associates (18) (Table 1). Next in order of frequency was contact with MINISIS staff (4) and that the software had been installed when they joined the organization (mentioned 3 times under "other"). Product reviews and information gathered at meetings and seminars were each mentioned twice. As well, two uses mentioned under "other" that it was when a bid was received on an RFP (request for proposal). Another user had consulted the "Collections Management Software Review" published by the Canadian Heritage Information Network and found information on MINISIS.

Software choices

Asked about what products they had considered for their information management needs, Northern users reported a broad range of product choices (Table 2). The most commonly considered was MINISIS (13), followed by Access (7), Oracle (4), and FoxPro (3). As well, the following software applications were mentioned once or twice: Adhoc, ADLIB, Basis, BRS Search, C2, Cairs, DBase, DB/TextWorks, DOBIS/LIBIS, Embark, FileMaker Pro, Foremost or Rims, Fulcrum, GEAC, GenCat, Grandview, Heritage, ILS (Integrated Library System), InMagic, Lotus Notes, PICA, Quadra Star, Quixis, Registar, Retreivalware, Sybase, SQL Server, Thesaurus Construction System, and Trim (one of only two products certified by US Department of Defense).

One user pointed out that Trim (produced by an Australian company called Tower) can interface with Oracle tables. This is important for their application and he was looking for assurance that MINISIS "was be compatible and could share authority files (with Oracle)." Another user said that Trim was a good off-the-shelf application, but that it was too difficult to modify. Related to accreditation, one user said it had been important that MINISIS was CHIN accredited. Another user,

who had switched to Oracle still uses MINISIS to extract data to create a searchable CDROMs (this function apparently is not in Oracle), but also pointed out that Oracle is also multilingual and makes a "light" version available for free downloading (this version is not multilingual and cannot do full text searching).

One user, who is looking to migrate from MINISIS, considered the linkages with other databases to be very important, and will be considering Oracle, Informix, and SQL Server. He stated that he will not consider MINISIS if it is not further developed to include such features as "compute" in the Windows version. His feeling was that some of these features were slow in being added because priority was being given to the development of library applications. Another user evaluated several products and decided to evaluate MINISIS in most detail and eventually to select it because it was less expensive than the other products considered ($9,000 versus $30,000 for the other products).

Four main reasons were given for selecting MINISIS by Northern users: low price; thesaurus support; web interface; and very customizable. Some related comments included: "the ability to customize to suit our own needs and the fact that the database structure included repeatable fields;" "because the RAD specifications are new, we may need to revise the database structure, and MINISIS gives us that adaptability;" "the strength of MINISIS is that it can deal with large chunks of textual data;" "MINISIS's relational capability — the ability to link authority records to descriptive records;" "its multilingual capability and fonts;" "the multilingual capability is important, and this is not available in Access, which requires two separate versions of the software; whereas, MINISIS requires only one version;" "MINISIS can be customized the way we want, but our consultant thinks some things (that were in the old version) may be missing in the Windows version;" and "the WWW interface is essential".

Criteria for selection

The criteria related to software selection that were rated (on a scale of 1 to 5) as most important to these Northern users (Table 3) were the ability to customize the software and the availability of a Windows version (both 1.8). These were followed closely by ease of use (1.9) and technical support and WWW capability (both 2.0). The lowest rating was given to multimedia (2.8). Under the category of "other" three users specifically mentioned the thesaurus capabilities possessed by MINISIS. In fact, InMagic was not placed on the short-list of software to be considered by one user because it lacked the thesaurus feature, although he said InMagic was widely used. Other factors that were mentioned as important were: the ability to interface with Oracle and other ODBC compliant systems, the inclusion of the compute function in the Windows version, and the importance of the thesaurus capability. One user expressed concern that the new version of MINISIS might cost significantly more than the old one because the current licence allows for an unlimited user base; whereas, the new client–server version might cost more for the 45–65 concurrent users they anticipate.

Sources of information

In terms of the sources of information that were rated as most important (on a scale of 1 to 5), hands-on demonstrations were number one (1.8) (Table 4). Next in importance were sales representatives (2.3), colleagues and associates (2.4), and product reviews (2.6). Brochures and advertising materials

were rated as least important (3.7). One user suggested that MINISIS could be better publicized. She had talked to others in her profession to obtain feedback on MINISIS and read a product review in ARMAS magazine (published by the Association for Records Management). One user suggested that MINISIS was still considered to be a "niche" product, and that until that changes there will be resistance in her organization to the adoption of the software. She suggested that MINISIS must better market itself in order to obtain some "major Government of Canada clients."

Software chosen instead of MINISIS

Asked what software they had chosen instead of MINISIS, these users had decided to install: Access plus SQL Server, CAIRS, Oracle, FileMaker Pro, Crystal(C2), and Lotus Notes. Their reasons for these choices were: Access – market leader; CAIRS – cost, ease of use, can customize, good technical support, multilingual, WWW, and multimedia; Oracle – technical support, sales representatives, and our decision to concentrate on one platform (have in-house expertise in Oracle); FileMaker Pro – cheap, works on Macintosh, easy to customize, interfaces with the Web; and Lotus Notes – customizable, secure, and plenty of resources available for development and maintenance.

Two users gave rather detailed replies with regard to why they had switched from MINISIS. Six reasons were cited by one user for the switch to Crystal (C2): (1) Modules for all library information management functions were available in Windows version ready for quick installation and were already in use elsewhere (almost all other vendors were still writing some windows modules or WWW interface, or else could not manage fast installation because of existing business); (2) seemed able to meet all main requirements straightaway; (3) at hands-on demos it looked easy to use and library staff liked it (made full use of Windows features); (4) Windows NT version available; (5) UK technical support available; and (6) good service previously from UK supplier when buying other products from them.

The rational another user provided for the migration to Oracle was expressed in this way: "If you expect people to pay $20,000 you must deliver. For about $20,000–$25,000 MINISIS still didn't do what we wanted, but we got Oracle plus all the tools we needed for about $40,000." Although no training is provided in the Oracle contract, Oracle's support was said to be "outstanding, and the documentation is excellent and there are many third-party books available". In addition, "the tools needed for management and Web access are all included and the Designer 2000 tool is easy to use and powerful." In addition, Oracle was seen to be "on the forefront of technology" and to be "fully compatible with other ODBC databases and be SQL compliant, which MINISIS is not".

What MINISIS can and cannot do

When asked if MINISIS can do things other software cannot do, 18 respondents answered yes, 6 said no, and 6 did not know. The unique features that were attributed to MINISIS were repeatable subfields, excellent text searching and fast retrieval, thesaurus management, multilingual capabilities, and the ease with which the database structure can be created and modified.

At the same time, some of the users expressed the view that MINISIS used to be "way ahead and was better than anything else" but that it had lost a great deal of market potential because it "lost lots of time" in its development. For example: "... 12 years later there are many systems that will do the

things that MINISIS does, but most will not do them as easily." One user reported that: "We are having some problems with character sets and limitations on customization of retrieval and reporting in our replacement system, which we did not have with MINISIS G. But the customization limitation may be an inevitable consequence of the ease of installation and use of an "off the shelf" fully integrated library management system."

Users now believe that other products offer the multilingual thesaurus features and that repeatable subfields and groups are included in such products as Oracle 8 (called nested tables). Other users expressed their concern that this feature may not be available in the new Windows version. Others mentioned that they thought that it was increasingly important "to provide fundamental tools as good plug and play modules — especially for developing countries" that "it is crucial to have standard features off-the-shelf in comparison to the early days when everything was built to the customer needs." They also suggested the need to include good data-conversion capabilities to facilitate data exchange. Finally, one user said that a feature of the old MINISIS was its capability to support SDI (selective dissemination of information), a feature which this user felt might be missing from the Windows version.

In response to the question that asked about things that MINISIS could not do compared with other products, 19 said yes there were things MINISIS could not do, 5 said no, and 13 said they did not know. Some of their comments: "There are many Windows features that MINISIS does not handle, for example, scrolling through lists (must now scan page by page). There are many such features that are not supported by MINISIS. Also, the documentation is not up to date." "We are using version G and lack easy data entry and update of relational structures; labour extensive import and export of data in many formats; intuitive user-interface; easy ad hoc sorting for display or printing; and easy ad hoc formatting for display or printing." "Lacks joins between several databases." "Cannot output printed formats in anything more than basic unformatted text format, and has terrible editorial interface." "Does not work with Macintosh and has no computer-based training or tutorial." " I have been told that ODBC drivers are available for the newest version of MINISIS , but I would be very curious as to how completely this service works, given the complexity of the MINISIS sub-field and repeatable field structure." "Certainly at the time we had to make the decision (end 1997), not all the library management modules for MINISIS 8 were available. Not sure of the position now." "The OPAC (Online catalog) was virtually non-existent in version G and the Query processor was the closest equivalent. This required extensive user training, and did not function as a "true" OPAC or library catalog (e.g., records were not sorted by title, author etc.) In order to have a true OPAC one would have to program an OPAC to interface with the MINISIS Query processor."

Four users expressed their need for a compute function and their concern about the strength of this feature. In one case, the user indicated that if the compute function was not adequate MINISIS would not "be in the cards for the organization." Delays in product releases were also cited as reasons for moving to other software. For example, in the words of one user "we have decided to move to Quadra Star, which is a library application with the periodical feature and the WWW interface now — not in the future." The other feature that user want assurances about is the ability of MINISIS to interface with Oracle and other SQL-compatible applications.

These users had quite different feelings about how well MINISIS might meet their current information management needs (Table 5). On a scale of 1 to 5, 8 users gave MINISIS a rating of 1, 7 users each rated MINISIS as 2 and 3; 3 rated it as 4, and 3 rated it as 5. Poor ratings were related to the fact that these users still had no Web interface or Windows version, and their clients expect things to be integrated on their desktop. One user expressed his concern about the upgrade path from the old version to the new one "because of incompatibility between the versions." In his opinion, some organizations had switched to other products rather than upgrade to the new version of MINISIS. Two users were also concerned about the availability of a client–server version of MINISIS. Because of the need to share data, users want to be sure that they will be able to import data from various databases because they see this as being very important to their future applications. One user suggested that it might be useful to develop MINISIS to operate as the front end (in particular a thesaurus module) for an underlying database management system (such as Oracle).

However, there is still some concern among users about usability: "I have high hopes that MINISIS will serve our needs, but I hear comments from other Centres saying MINISIS is too difficult, and not user friendly."

Association with IDRC

The association of MINISIS with IDRC was reported to have had an influence on the choice of software by 16 users from the North; whereas, 11 said it had no effect, and 1 did not know if it had had an effect. At the time the initial decision was made to adopt MINISIS four users said it likely was important, but they said that now any decision about software would "strictly be business based". Two others cited the fact that the development orientation of IDRC, which was shared by their organization, was a positive factor. In two other cases, there were "political" factors linking the organization using MINISIS and IDRC. In one of these instances, the respondent felt that if MINISIS had not been associated with IDRC it would not have been considered, because it is too small a niche product to be considered by a large organization. The "government link" was seen by one person as a possible negative factor because some "people don't like government things"; however she added that if MINISIS was outside IDRC "people might treat it as a start-up company, and may worry about its sustainability". This issue of credibility and long-term sustainability due to MINISIS's association with IDRC was mentioned by three other people as well; however, another user "recognized that it was not necessarily a guarantee of stability".

MINISIS applications

Users in developed countries reported that they use MINISIS most often for library management (cited 15 times) followed by archives management and records management (each cited 12 times) (Table 6). This was followed by project management, which was mentioned 11 times, inventory management (4 times), and museum management (2 times). In one case, the user reported that the records management function will be moved to Foremost by the end of 1998.

WWW

In terms of using MINISIS to provide web access to their data, 7 users said they did (although 2 qualified their reply by saying it was planned or just implemented) and 21 said they did not, although five said this was planned (but not necessarily by using MINISIS). One of the users reported that

they developed their own WWW interface because it took too long for MINISIS to developed theirs. For the time being, they will continue to use their interface with version G, rather than switch to version 8 because it is incompatible with the version they developed. You "cannot link externally to an internal record in the MINISIS database, we can in our version and this is very important."

Users were also asked how important (on a scale of 1 to 5) they thought that the WWW interface would be to their future use of MINISIS (Table 7). In total, 21 users rated it as 1 and one each said it would be a 2, a 3, and a 5. Asked if they felt that MINISIS could handle their future needs with respect to the WWW and the Internet, 10 said yes, 4 said no, and 14 reported that they did not know. One user stated that it "depends on whether we have a dedicated Internet connection as the MINISIS version 8 MWI dictates. At the present we are dialing up to an ISP, and maintain a copy of our database on the ISP's server. This database is accessible via our web site."At this stage most of those interviewed are just staring to use MINISIS to provide access, are considering it use, or are talking about doing so. In at least two cases, the respondents made it clear that if they had not had confidence in the web capabilities of MINISIS through demonstrations they would not have even considered the software for their needs.

One user reported that their systems people will not allow them to provide WWW access to their MINISIS data because the "security of the HP environment is not considered by internal security people to be sufficient." In another case, the user extracts data from MINISIS and physically moves it to another computer. They are looking at the Web version of MINISIS but feel it will be "just as much work to migrate to the new MINISIS as to switch to Oracle, and we are not sure MINISIS will be around."

Technical support

With respect to technical support, 24 users from the North reported that they had used the support, and 4 said they had not (Table 8). Technical support had been provided by IDRC most often (14 times) followed by on-site support (6 times). Four users reported they had received their support through contracts with consultant companies (mentioned under "other"). In all cases, the technical support was highly rated (average 2.0 on scale of 1 to 5). Two users did report difficult with obtaining technical support. One of these said that the initial problems had been cleared up over the last 6 months; however, the second said they had never been able to access technical support and felt it "was nonexistent".

What MINISIS has allowed

Asked about what MINISIS had allowed their organizations to do, the Northern users credited MINISIS with allowing their organizations to better manage their information resources. In the case of several of the Northern users, this occurred in the 1980s when "there was no other archives or records management software available." As a result, these organizations "became more effective in terms of the dissemination of information," were able to "significantly improve the daily management of archives and records operations," and gained the ability "to produce printed catalogues at low cost." More recent adopters of MINISIS also see similar advantages. They anticipate being able to "expand our user community via the WWW," "give broader access to our data," "provide an online database of all holding to our staff and create a database on the web in the

future," and make "all of our services available on the web." One user reported that she was able to bring her database in-house rather than have it managed by a third party, but was still able to share information about her organization's collections with similar organizations.

There are still things that these Northern users would like to be able to do with MINISIS. Some of the features that these users want are: the ability to interface with other databases and be ODBC compliant; to allow their users (throughout the world) to have access to their the database directly for structure queries; improved reporting to make it easier to edit and correct text but also to be able to produce structured reports that can be disseminated over the WWW; records and life-cycle management; the ability to generate reports directly from the application; the ability to link to HTML files in the database; and a total library package that includes loans, acquisitions, and periodical management"; "seamless integration of curatorial, archival, and bibliographic records, each using the conventions of the appropriate profession'; and "better interface with office automation (OLE etc.) and true library OPAC". One user of version G noted that it was difficult to add to existing records. He noted that "you can take information from the second database and make a third but I would like to take from the second and simply add it to the first database".

Many of their concerns relate to MINISIS meeting its commitments to the development of promised features and the timetable for their release. In particular, users are concerned that the web version does not have the same functionality as version G. They are also keen to have the compute function enhanced and are awaiting the release of the client–server version in March 1999. In short, "the things promised at the MUG meeting in Ottawa must be delivered."As a result, some of the users who are using version G and would like to provide access to their data by migrating to version 8, are taking "a wait and see" approach before making decisions about future software acquisitions.

Other comments

Asked if they had anything else to add, these users provided a broad range of comments. Many took the time to express their concern that MINISIS meet its commitments. These are summarized in the words of one user: "Our main concern is will version 8 and the add-ons be available on time. We have waited a long time for the new version and MINISIS's reputation has been hurt in the past. Delivery of the new version is a major concern and documentation must be improved — this includes both user manuals and information on how to do customization." Another user noted that he "was 85% positive but was willing to become negative very quickly" and that the "upgrade in December is crucial, it must be a fully relational database." Another said that: "we would have stayed with MINISIS if it (Windows version) had been earlier — it was just too late."

One user expressed his complete dissatisfaction: "Since the rise of MINISIS 8 and the start of the new marketing department at IDRC we have lost all touch with the software and indeed IDRC, so I am no longer interested in giving any information to them, as they give me no support whatsoever. So, if you want to send IDRC a message from me, let it be that they should not forget that we still exist and that we are depending on them to be able to do any marketing of MINISIS . When they do not answer repeated e-mail messages, not giving us price information, not letting us evaluate the software and so on, they cannot expect any feedback from us."

Two other users felt that they had been all but ignored by MINISIS in the last several years. One said the only contact she had had with MINISIS were "phone calls about once a year and some sales literature." Another noted that he had suggested that they might be dropping MINISIS and that "no effort was made to try to keep us as a user or to determine what features were missing or lacking in the software — this was a bit disappointing."

Some users talked of problems they had encountered: "There have been periods where our project was held up waiting for MINISIS information to be provided and the input has not always been of very good quality. Always seemed to be rushed effort. It feels that there are insufficient staff at MINISIS to manage all the clients they have." "One of our chief problem with MINISIS seems to have been that the sales department also designed the database. It is not clear why this was not done by a programmer. Two problems arose from doing things this way: (1) there was no protocol for designing the database: no schedule, no consultation process, no guidelines; (2) the database doesn't do what we needed it to do, so we no longer use it at all."

Other users suggested that they may move to other products:

"MINISIS has allowed us to manage our libraries for 10 years. We'll have a choice to do in one year for a new (library system) and I don't know if MINISIS will be chosen again."

"Please note that our evaluation (of software products) was first made in 1982. The software landscape has changed enormously since then; there are now other packages available which support text storage/retrieval. We are presently considering a replacement for the MINISIS-based system (under version G); many factors will come into play, including a desire to use a institutional-standard package."

"We were MINISIS users since 1986, but in the last few years we very rarely use it. We moved all our databases to Oracle and Access and we are using MINISIS for only some simple information."

"We currently are using MINISIS to help manage information about objects in our collections, but will be moving to a new system sometime next year. We've enjoyed our working relationship very much. Even though we did not choose MINISIS for our next generation of system, I think MINISIS has great promise in the museum world. It's easy to work with, inexpensive, and the support is superb ... We tried hard to find a way to continue using MINISIS for the next generation of collections management application. In the end we decided we could not fragment our in-house expertise on two different database management systems."

"Reasons for not choosing MINISIS 8 were concern about non-availability of technical support in the UK, and a question mark about future development of MINISIS. The experience with the long delays on the MINISIS H/8 project (originally due for the HP3000 in 1993) and then the abandonment of the HP3000 version of MINISIS H/8 did not make a good impression on some senior management here. There was a long period when we received very little information about what was happening on MINISIS development."

Some users also made suggestions about what MINISIS and IDRC should do in the future. For example, it was suggested that "IDRC should look at various arrangements, for example licencing the software to niche vendors or finding a way to get the software to other vendors in the Third World. IDRC could turn over the software to a Canadian-based vendor such as GenCat, which is the only application used at the University of the West Indies, or to RSMS, which is an Ottawa-based records-management company."

"MINISIS could be a niche product for developing countries. Donors could contribute to that exercise and in return these donors would have access to the software for use in their projects. But, MINISIS must go out of its way to increase donor interest; it must do market research on donor needs and take a much more business-like approach — for example, we have 20 informatics projects and MINISIS could likely be part of least ten of them. However, it is currently not used in any — why?"

"MINISIS has been a product and service of IDRC for many years. There are some of us with high expectations that the new generation of MINISIS will help to revolutionize the way we work — we have invested substantially in preparing a national thesaurus, in purchasing MINISIS software, and in training our staff — all on the understanding that IDRC will back its products and services. The international capabilities of the software are excellent and it is our hope to eventually establish national and international database connections."

Others took the opportunity to credit the quality of the product development group at MINISIS: "The people are bright," "the technical team is fantastic"; and "the software was innovative, powerful, and groundbreaking in many ways." But, in the same breath they cautioned that "they do not have the resources needed — no money," "they desperately need more programming resources," and "some people feel the MINISIS team is not strong enough to deliver — the technical skills are there but they are overextended." They also expressed concerns over the future: "Because MINISIS is part of IDRC, this may hold back marketing" and in terms of acquiring additional resources: "the worst source of capital is the Government of Canada in the 1990s." For these reasons, it was suggested that "MINISIS cannot compete commercially with Oracle or BASIS — it just does not have the resources." This concern about MINISIS's future is becoming an important consideration for users who are currently making decisions about software products — it is part of their "risk" statements in product reviews. As one user said: "a clear statement from IDRC about its future priorities for MINISIS over the next 4 to 5 years would be useful."

This concern with resources also extends beyond MINISIS and IDRC. Users are finding that there are a limited number of consultants to assist them with their MINISIS applications (compared with Oracle for example) and that in comparison to other applications, documentation from MINISIS is limited and there are no third-party resources or manuals available.

Some of these users took the chance to express their concerns for users in the Third World. One user who had been involved in some MINISIS training in Asia thought that most developing country users if they left MINISIS "would not likely switch to CDS ISIS, but would rather go to Microsoft SQL." She also thought that many of the Third World users were managing very small databases

"only 200–300 records and that given the changes in software and hardware it is not as crucial to maintain MINISIS because the poor organizations are not using it (MINISIS) — only the rich are using it in the Third World." Another user recognized that the "Third World should have preferential access to software; however, it may be better for IDRC to simply buy software from a commercial company and give it to libraries and such in the developing world (rather than develop its own products)".

IDRC Input

Thirteen current IDRC staff who are involved in information-related activities were interviewed (two due to the very restricted time available for the interviews were asked a limited set of questions). In addition, two other former senior staff members knowledgeable about MINISIS were questioned. Of the IDRC staff interviewed, 10 reported that they were "fairly familiar" with MINISIS, one said they were "not familiar" (especially with the latest versions), and one said they were "very familiar". All but one of these IDRC staff members first heard about MINISIS when they started at IDRC. In some cases, this was 14 years ago, in others it was less than a year ago. The fifteenth person had been exposed to MINISIS when working at another international organization.

Knowledge about MINISIS in IDRC

Of the IDRC staff members who were interviewed, 8 said they had had MINISIS and its features and potential users explained to them. However, 5 of these people said that they had to make the effort to find out or had to "insist" on getting information from MINISIS staff, and 2 had just learned a bit about MINISIS at the recent MUG meeting in Ottawa in September. Comments were made such as: "what I know is what I've gathered on my own," "I learned from colleagues not from MINISIS staff," and "if I had not asked, I would not have known it existed." Four people said they had never been briefed.

One user, who has MINISIS installed in two of his projects, said that he had to insist on getting a copy of MINISIS on his laptop and asked "how can I be a salesman if I cannot see or get to know the product?" One of his projects is designed to store film clips in a database and they are switching to MINISIS, but he said they have been unhappy with the service they have received to date — "it took 3 months to ship the product, then it went to the wrong address, and there were still bugs in the program — what was sent was a demo and the recipient expected the full version."

Usefulness of MINISIS to IDRC

Asked whether it had been useful to IDRC to have MINISIS in-house, 9 IDRC staff said yes and 2 said no. Comments included: "when created, IDRC was right on," "it was a significant development at the time," "until the last few years it was (useful)," "in its time, it served a niche marketplace that no one else was serving," "MINISIS gave a great image for IDRC and Information Sciences Division in past," and "MINISIS was responsible for the good reputation of IDRC within the Third World." However, today: "it gives the wrong impression of IDRC — we are not a software development outfit" and "currently there is no evidence that it is (useful to IDRC)."

The IDRC staff who were interviewed expressed the opinion that MINISIS has "not kept up" with development in technology. One staff member suggested that "MINISIS got stuck because of its association with Hewlett-Packard. In the mid-1980s, microcomputers were starting and there were no products similar to MINISIS available. At this time, the microcomputer-based version was planned but the entire code had to be rewritten. Because of a lack of programming resources this took too long and MINISIS missed the opportunity to be a commercial success." In fact, this person went on to say that "if this had been a regular IDRC funded project it would have been killed due to the lack of meeting critical dates in project implementation."

Other staff members said that IDRC has changed its focus and that MINISIS has difficulty fitting into the mandate as they understand it. Now, one said, we are providing " researcher support – networking and information delivery." Another comments included: "even our information programs no longer have the same focus — they're no longer content directed, they are now focused on issues such as connectivity and policy" and "IDRC is out of the technology business — we are no longer supporting technology research."

Nonetheless, it was pointed out that "MINISIS gave IDRC an understanding of the problems faced by developing countries and provided first-hand experiences in these problems ... and an important bonus was getting developing countries to help with the development of MINISIS." As well, "it came from a real need and provided IDRC with a chance to develop in-house expertise." However, "people underestimated the amount of money that would be needed to develop such a software product, and the investment was not sufficient for commercialization — only enough for research."

It was also suggested that the "software industry is much more mature now." For this reason, "MINISIS faces competition from a range of products, including CDS ISIS, InMagic, and BestSeller." And it was suggested that in Africa, libraries are increasingly looking at South African products. One Program Officer commented that "five guys just can't compete with a major software company" and added that "it is very difficult to expect that a commercial organization and a donor agency to exist in harmony — their objectives are just too different."

Another concern that was raised was that there was no longer any link to ongoing IDRC programs. In the past, there were close links with the projects developed by the Information Sciences Division, but "there are absolutely no links to the programs now." Therefore, program officers are no longer "marketing" MINISIS to project recipients.

MINISIS and its users

Asked what things MINISIS can be used for, almost all those interviewed pointed to the ability of MINISIS to manage libraries and bibliographic records. Some also specifically mentioned the multilingual capabilities and repeatable fields. However, it was also pointed out that "MINISIS was much more relevant 20 years ago. Now there are more database companies out there, and these companies have much deeper pockets and can support software development." Another Program Officer added "there are plenty of people doing database development and changes are occurring too fast. It is too expensive to keep up and why should we produce our own software, our business is research and development."

Asked about who the users of MINISIS were in the Centre, most staff knew that the Library used MINISIS. As far as external users, they were less sure but most stated that the thought that it was libraries and research institutions in developing countries. Only one mentioned large libraries in Canada and Europe and international organizations such as ILO and FAO. Only one Program Officer had projects that were using MINISIS.

MINISIS and IDRC mandate

Asked specifically whether support for the development of software products contributed to the fulfilment of IDRC's mandate, 9 IDRC staff said no, and 3 gave a qualified yes. In some cases, their negative response was stated such as "would have said yes before, but not now" and "it pains me to say this, but no." Others stated that MINISIS is small (with 400–500 users) "compared to CDS ISIS, which has 100,000 users." Another Program Officer pointed out that "software codes and the mechanics of the program are one thing to develop; however, marketing and distribution is quite different and very difficult to get within the IDRC culture." It was also suggested that "the Board of Governors is no longer interested in hardware and the only software they have an interest in is people — our corporate objectives are not product-oriented but service-oriented." Another noted that "the link between programs and MINISIS is no longer there since it is now located in the Resources Branch." Another added that: "MINISIS has been nearly absent for 5 years from connection to IDRC projects — it is no longer making a contribution to IDRC's reputation."

One person questioned why MINISIS had not already found a "business partner to invest in the product and speed its development" because they thought that was supposed to be happening already. Another suggested the need to "flog" MINISIS to such groups as the Ottawa Carleton Research Institute and Industry Canada and that there was a need for CEO with a strong business background to complement the existing technical skills within MINISIS.

Another staff member added: "Initially it (MINISIS) was an enabling tool that helped to meet the challenges of the developing world. With time it became more technology driven and became larger than life. Technology must meet program objectives. If there is not a sufficient business case, then it must be justified on the basis of its provisions to the development community. IDRC was trying to wean MINISIS as a cost-cutting measure, but it should be assessed on the basis of its value to the development community." He went on to add that "The Center as a whole lacks vision, where does it want to be in a year 2004? Why is this evaluation of MINISIS being done separately from any Center vision of where it wants to go?" However, it was also recognized that there is still a great need to share information among organizations (donors, recipients, and IDRC) and they need a mechanism for sharing. "If MINISIS can be used for this, maybe it is worthwhile — however there may well be other products that can be used."

One Program Officer felt that MINISIS might be able to position itself as a database for the WWW, but that there is a strong tendency for people to use products by Microsoft and other major software vendors. As an example, he pointed to PAN, which recently evaluated several products and decided to purchase Informix for their web-based information management needs at a cost of $70,000. He wondered why MINISIS had not been chasing after PAN to gain a client. "There was no follow-up — we should be 'special clients' within IDRC."

Although one staff member said that he did "not believe that MINISIS can compete with a very few programmers against large corporations" he was "concerned about the user community" and felt that "there was a need to provide some ongoing support for users, otherwise the information could get lost." Program staff recognize that without MINISIS "many smaller users would have difficulties" and that IDRC has some "moral obligation to Third World agencies and a business obligation to paying customers" therefore "it must be prepared to invest resources into helping clients adapt to the new modality".

Future support for MINISIS

Asked if the Centre should continue to support MINISIS, 7 staff said no and 5 said yes, but of these 5, three qualified their replies with comments such as "I'm not at all sure". One person pointed out that there were a couple of options: "support further development of MINISIS; or provide support and maintenance to existing users. However, if limited to the second choice, MINISIS will die." Another pointed out that there is "no reason to support MINISIS unless the Government of Canada is supporting many other software development groups. Other Integrated Library Systems are out there. If MINISIS is cheaper for developing countries, then maybe it is worthwhile." One staff member said that other similar types of activities have been dropped as IDRC's priorities have changed. For example, GIS and remote sensing no longer exist. Another Program Officer mentioned that other software products such as ELADA 21 are now also gone. Another Program Officer said that "if IDRC is providing a service to a niche where nothing else exists, then yes support is worthwhile, but if it is competing against commercial software products, then no because it cannot compete."

One IDRC person stated that it is "too late now." There has been "no promotion for MINISIS internally. It is hid in a corner — not part of IDRC. IStar is just as close to IDRC as MINISIS. The question is — do they have a lot of software development to do or they just doing maintenance? If only maintenance then maybe maintain, but sell exclusively to developing countries. Perhaps MINISIS could plan with UNESCO to market – the Web interface is the key – 'access via the web' could be the selling feature." Similar sentiments were expressed in this way: "now there are other commercial products available. In the past there was nothing to use. The new products may not be as good, but there are products available. One of the problems with MINISIS has been that it has been much to quiet in-house and there has been no buy-in from the program side, even among those who are interested in information systems."

However, some people did feel that support might be appropriate: "IDRC just can't just drop MINISIS because people in small institutions use it. IDRC has a responsibility to provide support to insure that data are not lost. We need to provide an alternative. IDRC would need to help migrate data and also provide some assistance to help institutions make a choice of what system to migrate to." Another said: "There is some opportunity now because MINISIS is Windows based and web enabled. But results must be clear and benchmarks and timetables must be established and met for performance. Financial reasons put MINISIS in jeopardy because future plans for MINISIS were based on minimizing spending at a time when spending should have been increased." A third offered the following observation: "We should support at this point because it has a marketable product. The rationale for IDRC support should be to provide for more easy use in developing countries. If it is

a commercial entity, it can't be restricted to developing countries and it will require core support to provide support and services to developing countries, which are seen as a loss to commercial operations."

If the Centre does decide to reduce or terminate support for MINISIS, IDRC staff offered several suggestions about how this could be done. One Program Officer said you just have to announce that this is the last version, and if need be give assistance to transfer MINISIS files to another piece of software (perhaps CDS ISIS). He went on to say that "in the United States and Europe its doesn't matter — companies go bankrupt and people deal with it." Another Program Officer said that by signaling to the user community that we will no longer support MINISIS it allows people not to become involved and encourages them to choose some other product. He also suggested that those users on the HP3000 version will be "forced" to migrate soon and they can choose a new product if need be. Therefore, "any concern about the future of MINISIS should only consider the Windows version. Any small libraries that are using the DOS based version may require support, but InMagic in DOS is available for free and this or CDS ISIS could be used."

Others mentioned that "the reputation of IDRC and Canada must be considered." And there was support for the provision of some sort of support to allow current users to move to another system, and to guide and assist them with this transition if need be. If support is to be ended, it was generally suggested that the transition period should not last more than 1 or 2 years. There was also an acknowledgment that the human resources issues would be hard to deal with. One way or the other, it was suggested that no matter how good MINISIS was it was "better to wrap it up neatly than just let it dangle."

One suggestion was that "MINISIS should be sold to a developing country company and let them go with it because they may have a better feel for the product and its markets." Another suggestion was that it be turned over to the employees and privatized like the Queen's Printer, but a caution was added: "MINISIS people are not good at marketing, they are development people at heart." Another added: "If a separate company is spun off, it should make a commitment to provide support to Third World. Someone from IDRC should be on its Board to ensure it follows this guidelines. IDRC could continue to get credit but have no financial involvement."

One Program Officer was quite blunt: "MINISIS was challenged to commercialize and it has not done so to date — this is a message. MINISIS is no longer an important part of IDRC's business. Changes are occurring much too quickly, and it is hard to keep up. The capacity for research and development of MINISIS and its ability to stay current and undertake commercial development is limited." Another staff member said that "the development of the online interface was so slow because MINISIS had so few resources. This points to the need for a whole bunch more money or don't do it at all."

Possibility of self-financing

Asked if it is reasonable for MINISIS to be self-financing, 6 of those IDRC interviewed said no, and 5 said yes. Of the 5 who said yes, one said "perhaps", one thought a different skill set was needed within MINISIS, another said that if the product was useful it would be commercial otherwise it

would die, and another added that if it was to be a commercial success "IDRC was completely the wrong place to be because it has no access to venture capital."

One Program Officer suggested that it may be possible to spin off a company. "It is too easy to stay in the protective arm of IDRC. MINISIS should get a commercial loan, perhaps with IDRC as a partner." However, this same person suggested that if he was looking for a software product he would be reluctant to go with a company with an installed base of only 400–500 clients.

Another Program Officer said "my impression is that they failed to take advantage of new market directions. They did not embraced new standards such as ODBC compliancy in the first-place. It is also not interoperative with other products. It is not so much that MINISIS is heading in the wrong direction, it is just late – and commercial terms this means being out of business."

"Under the current constraints in developing countries it will be difficult to make MINISIS a commercial success. Development costs are high and IDRC may not be able or willing to provide enough resources. Decision is lacking in IDRC. This is not just about software, but about a mechanism to manage knowledge. It is clearly not part of the philosophy of a commercial company, which looks to maximize profits and minimize overheads. MINISIS is operating in a niche market and therefore the commercial potential is very restricted — won't sell thousands of copies to libraries, museums, and archives." Another added: "Because MINISIS is essentially dealing with the development community, partnership with a private sector company for investment seems necessary and because United Nations agencies use MINISIS, a private company might be interested in investing to gain access to this market." Other features that were suggested might attract a commercial buyer were: its multilingual capability — some others have, but none better and its flexible function — you can program anything relatively simply but you must be a programmer.

Another Program Officer pointed out that "internal databases are meant only for the institution — the Web interface allows these to be shared with the world." He said that developing countries still require assistance to put their own information on the Web and also to create databases with images and multimedia. He saw the importance of building content for the Internet, but felt that software sales "cannot be profitable in developing countries at this time." In this regard, he suggested that MINISIS alone is obsolete. If it is packaged with the web interface that may make it more interesting because it could be used to make CDSISIS and MINISIS databases available to the world. Many government databases in the Third World, he said, are on CDSISIS; therefore, MINISIS could be used to provide access to the data as well as to Internet search capabilities.

Appendix B: Contacts

Frédérique Abiven
Head of Documentation Center, Centre d'Etudes Prospectives et d'Informations Internationales, Paris Cedex 15, France

Yusra Abu Ajamieh
Library Director, Abdul Hameed Shoman Foundation Public Library, PO Box 940255, 11194 Amman, Jordan

Wafaa El Alami
Spécialiste en informatique, Centre d'Informations et de Documentation, Organisation Islamique pour l'Education, les Sciences et la Culture (ISESCO), Avenue Attine, Hay Ryad, BP 2275, 10104 Rabat, Morocco

Bencherqi Aldelmajid
Information Specialist, Institut National de la Recherche Agronomique (INRA), Division de l'Information et de la Formation, 6512 RI, Rabat, Morocco

Dale Alexander
Systems Manager, Caribbean Documentation Centre, Economic Commission for Latin America and the Caribbean, PO Box 1113, Port of Spain, Trinidad and Tobago

Carol Amaratunga
Maritime Centre of Excellence for Women's Health, PO Box 3070, Halifax, Nova Scotia, B3J 3G9

Ronald Archer
Senior Program Officer – Information, Programs Branch, IDRC, PO Box 8500, Ottawa, Ontario, K1G 3H9

Yahia Bakour
Director General, Arab Organization for Agricultural Development (AOAD), P.O. Box 474, Khartoum, Sudan

Alison Ball
Project Officer, Research Information Management Services, IDRC, PO Box 8500, Ottawa, Ontario, K1G 3H9

David Balson
Executive Director, Bellanet, PO Box 8500, Ottawa, Ontario, K1G 3H9

Nasr Bataineh
Head of Programming and Systems Analyst Division, Yarmouk University, Computer and Information Center, Jordan

Debbie Beer
Systems Librarian/Devline Manager, Institute of Development Studies, Brighton BN1 9RE, UK

Rashidah Begum
Chief Librarian, Universiti Sains Malaysia (USM), Minden, Pulau Penang, Malaysia

Lisa Betel
Resource Inventory Project Co-ordinator, Ontario Women's Health Network, 1900-180 Dundas St. W., Toronto, Ontario

Ed Brandon
Year 2000 Project Coordinator, IDRC, PO Box 8500, Ottawa, Ontario, K1G 3H9

Gilles Chatry
Service de la Documentation et des Bibliotheques, Institut Français de Recherche pour l'Exploitation de la Mer (IFREMER), Plouzane Cedex, Ifremer BP 70 29280, Plouzane, France

Gilles Chiasson
Chief Information Officer, Sport Information Resource Centre, 1600 James Naismith Drive, Gloucester, Ontario, K1B 5N4

Gilles Cliche
Program Officer, IDRC, PO Box 8500, Ottawa, Ontario, K1G 3H9

Anthony A. Cortez
Information Technology Officer III, The Garments and Textile Export Board, Department of Trade and Industry, New Solid Building, 357 Gil Puyat Avenue, Makati City, Philippines

Ron Davies
President, Bibliomatics Inc., 48-200 Owl Drive, Ottawa, Ontario, K1V 9V7

Anne Di Lauro
Consultant, 7340 6th Avenue, Montréal, Quebec, H2A 3E7

Wilfredo A. Dimamay
Director, Computer Center, Mindanao State University, Iligan Institute of Technology (MSU-IIT), Tibanga, Iligan City, Philippines

Birru Dori
Information Systems Coordination and Processing Department, National Computer and Information Centre, Ethiopian Science and Technology Commission, Addis Ababa, Ethiopia

Frew Dubale
Senior Information Officer, United Nations Economic Commission for Africa (UNECA), PO Box 3001, Addis Ababa, Ethiopia

Pat Fader
Clearinghouse Coordinator, Canadian Women's Health Network (CWHN), 203-419 Graham Avenue, Winnipeg, Manitoba, R3K 1E2

Nedal Fares
Head of Computer Center, Abdul Hameed Shoman Foundation, PO Box 940255, Amman 11194, Jordan

David Ferrier
Computer Systems Manager, National Museums of Scotland, Royal Museum of Scotland, Edinburgh, UK

Claartje Droogleever Fortuyn
System Manager, Information, Library and Documentation, Royal Tropical Institute, Mauritskade 63, Postbus95001, 1090 HA, Amsterdam

Frances Julius Friedland
Database Analyst, Intergovernmental Committee on Urban and Regional Research, 150 Eglinton Avenue E, Suite 301, Toronto, Ontario, M4P 1E8

Frances Julius Friedland
Information Systems Management, 11 Festival Drive, North York, Ontario, M2R 3T9 – second address??

Terry Gavin
Director, MINISIS Systems, IDRC, PO Box 8500, Ottawa, Ontario, K1G 3H9

Ricardo Gomez
Program Officer, Programs Branch, IDRC, PO Box 8500, Ottawa, Ontario, K1G 3H9

Ross Goodwin
Arctic Institute of North America (ASTIS), University of Calgary, 2500 University Drive NW, Calgary, Alberta, T2N 1N4

Jose L. Guerrero
Director, Science and Technology Information Institute, Bicutan, Taguig, Philippines 1631

Kim Han
Indexer/Researcher, International Court of Justice, Peace Palace, The Hague, The Netherlands

H. Hardenbol
Specialist Computer Applications, Institute of Social Studies, Kortenaerkade 12, 2518 AX, The Hague, The Netherlands

Mark Hopkins
Metropolitan Toronto Archives and Records Centre, Toronto, Ontario

Teng Hui Hwang
Librarian, Asian Vegetable Research and Development Center (AVRDC), PO Box 42, Shanhua, Tainan, Taiwan 741

Rafael Ibarra
Information Technology Director, Universidad Centroamericana José Simeón Cañas, Boulevard Los Próceres, San Salvador, El Salvador

Jean-Michel Johnson
Director of Indexing and Reference Services, Sport Information Resource Centre, 1600 James Naismith Drive, Gloucester, Ontario, K1B 5N4

Melanie Johnston
Cataloguer/Assistant Registrar, The Robert McLaughlin Gallery, Civic Centre, Oshawa, Ontario, L1H 3Z3

Carole Joling
Director, Research Information Management Service (RIMS), IDRC, PO Box 8500, Ottawa, Ontario, K1G 3H9

Jana Khadra
System Analyst, Yarmouk University, Irbid, Jordan

Mema Klaoudatou
Database Manager, Information Department, Hellenic Organization of Small and Medium-Sized Industries and Handicrafts (HOMMEH), Xenias 16 11528, Athens, Greece

Bob Krawczyk
Description Standards Officer, Archives of Ontario, Ministry of Citizenship, Culture and Recreation, Unit 300, 77 Grenville Street, Toronto, Ontario, M5S 1B3

Age Jan Kuperus
Kuperus Automatisering, Gerrit Schutlaan 2, 6866 CA Heelsum, The Netherlands

Renald Lafond
Team Leader, PAN Networking, Programs Branch, IDRC, PO Box 8500, Ottawa, Ontario, K1G 3H9

C.S. Lakshmi
Director, Sound and Picture Archives for Research on Women (SPARROW), B-32, Jeet Nagar, J.P. Road, Versova, Mumbai, Maharashtra, 400 061, India

Anne Lauzon
Archives, University of Ottawa

Frans Leemreize
Wageningen Agricultural University, PO Box 9100 Gen. Foulkesweg 19, 6700 HA, 6703 BK Wageningen, The Netherlands

Mohamed Lemallem
Head of Library, Centre de Documentation Agricole, Institut Agronomique et Vétérinaire Hassan II, 6214 Rabat-Instituts, Morroco

Sylvain Lemieux
Project Manager, Systems Division, Information Management Branch, National Archives of Canada, West Memorial Building, 344 Wellington Street, Ottawa, Ontario, K1A 0N3

Göran Lindgren
Programmer/Analyst, Orbil, Kungsängsgatan 17-19, S-753 22 Uppsala, Sweden

Christian R. Looten
Documentation Information Manager, ALCATEL, Villarceaux 91625, Nozay, France

Nicholas Nihad Maliha
Manager, Library and Information Services, ICARDA, P.O. Box 5466, Aleppo, Syria

Awni Mansour
Library Manager, Zarka Private University, PO Box 150863, Zarka, Jordan, 13115

Paul McConnell
Former Deputy Director Information Sciences Division and former Director of Resources Policy Group, Resources Branch, IDRC, PO Box 8500, Ottawa, Ontario, K1G 3H9

Vijay Menon
Secretary-General, AMIC, Jurong Point P O Box 360, Singapore 916412, Singapore

Zbigniew Mikolajuk
Senior Program Specialist – Informatics, Programs Branch, IDRC, PO Box 8500, Ottawa, Ontario, K1G 3H9

Sally Anne Montserin
Head, Information Networks Division, Office of the Prime Minister, Libraries Division, Port of Spain, Trinidad, West Indies

Habib Mouelhi
Head of Information Technology Department, Arab League Documentation and Information Centre (ALDOC), Tahrir Square, Cairo 11642, Egypt

Ted Murray
Director, Management Information Services, IDRC, PO Box 8500, Ottawa, Ontario, K1G 3H9

John Nesbitt
Information Officer, The World Bank, 1818 H St. NW, Washington DC 20433, USA

Amy Noel
Manager, Registrar's Office, The J. Paul Getty Museum, Los Angeles, California, USA

Abel L. Packer
Acting Director, Centro Latinoamericano e do Caribe de Informaçao em Ciencias da Saude (BIREME), Rua Botucatu 862, Sao Paulo, SP, Brazil

Harsha Parekh
Professor of Library Science and University Librarian, SNDT Women's University, 1 Nathibai Thackeysey Road, New Marine Lines, Mumbai, Maharashtra 400 020, India

Charles Patch
Director of Systems, Historic New Orleans Collection, 533 Royal Street, New Orleans, Louisiana, 71030, USA

Don Paul
Technical Coordinator of Corporate Memory Systems, International Development Information Centre, Policy Branch, Canadian International Development Agency, 200 Promenade du Portage, Hull, Quebec, K1A 0G4

Shao Ping
Library of Southwest University of Finance and Economics, 55 Guang Hua Cun, Chengdu City, SiChuan Province, China

Tony Pittaway
CAB International, Wallingford, Oxon, OX10 8DE, UK

Leah Polishchuk
Database Analyst, Canadian Centre for Occupational Health and Safety, 250 Main Street East, Hamilton, Ontario, L8N 1H6

Frank Provenzano
Systems Administrator, Management Board of Cabinet, Government of Ontario, 77 Wellesley Street W, Toronto, Ontario, M7A 1Z6

I.K. Ravichandra Rao
Professor and Head, Documentation Research and Training Centre, Indian Statistical Institute, 8th Mile, Mysore Road, Bangalore 560 059, India

Muhamad Razali b Mohd Sirat
Manager, Integrated MIS, 11A-D, Jalan Wawasan Ampang 2/8, Bandar Baru Ampang 68000, Ampang, Kuala Lumpur, Malaysia

A. S. Reyngoud
Ministry of Foreign Affairs, Den Haag, The Netherlands

Michael Roberts
Internet Communications Specialist, Bellanet, PO Box 8500, Ottawa, Ontario, K1G 3H9

Marlene Roy
Information Resources Co-ordinator, International Institute for Sustainable Development, 6th Floor, 161 Portage Ave. E., Winnipeg, Manitoba, R3B 0Y4

Regina Sarosiek
Head of Division, Computer Centre, Chancellory of Sejm, Warsaw, Poland

Kathy Scardellato
Manager, Systems Development, Metropolitan Toronto Reference Library, 789 Youge Street, Toronto, Ontario, M4W 2G8

Clive Smith
Archivist, The World Bank, 1818 H Street NW, Washington, DC, 20433, USA

Saddik Solbi
Systems Development Officer, UNECA/DISD PO Box 3005, Addis Ababa, Ethiopia

Steve Song
Program Officer, Programs Branch, IDRC, PO Box 8500, Ottawa, Ontario, K1G 3H9

Alison Sterling
Ontario Women's Health Network, The Ontario Prevention Clearing House, 1200 - 415 Youge Street, Toronto, Ontario, M5B 2E7

Martha Stone
Former Director General, Information Sciences and Systems Division, IDRC, PO Box 8500, Ottawa, Ontario, K1G 3H9, currently, Senior Partner, MOENSTON Associates, PO Box 954, Station B, Ottawa, Ontario, K1P 5R1

Fahad A Al Subaihi
Chief Librarian, The Saudi Fund for Development, PO Box 50483, Riyadh 11523, Saudi Arabia

Freda Thompson
Data Base and Systems Analyst (DBA), Systems Division, Information Management Branch, National Archives of Canada, West Memorial Building, 344 Wellington Street, Ottawa, Ontario, K1A 0N3

Minaxi Trivedi
Deputy Librarian, National Information Centre, SNDT Women's University Library, Sir Vithaldas Vidyavihar, Juhu Road, Santacruz (W), Bombay, 400 049, India

Bridget Turner
Talanoa Information Management, 91 Ivy Crescent, Ottawa, Ontario, K1M 1Y1

William Umbina
International Centre for Research in Agroforestry (ICRAF), United Nations Avenue, PO Box 3067, Nairobi, Kenya

Robert Valentin
Chief Scientist, IDRC, PO Box 8500, Ottawa, Ontario, K1G 3H9

Mardi Weltman
Acting Director, International Development Information Centre, Policy Branch, Canadian International Development Agency, 200 Promenade du Portage, Hull, Quebec, K1A 0G4

Barry Wood
Head, Systems and Product Development, Depository Services Program, Public Works and Government Services Canada, Constitution Square, 350 Albert Street, Ottawa, Ontario, K1A 0S5

Jiang Xiangdong
General Manager, TechStone Computer Company, 1 Baiwanzhuang South Street, Beijing, China, 100037

Enaya Yaseed
Director of Information and Computer Department, Ministry of Economy and Trade, Palestian National Authority, PO Box 1629, Ramallah, West Bank, Palestine

Appendix C: Interview Guides

These are the basic interview guides. Depending on the background and involvement of the person being interviewed, not all questions were asked of all people. Often, additional questions were added to explore interesting areas that arose during the interview.

Current and Past MINISIS Users

1) Obtain name, title, telephone number (with country, area, and city codes as required), mailing address, and experience with MINISIS.

   Name:
   Title:
   Phone:
   Address:

   Years of personal experience working with MINISIS:

   Years that organization has used MINISIS:

2) How did you first hear about MINISIS?
   Place an "x" within the () to indicate answers.
   () MINISIS staff
   () IDRC project staff
   () colleagues/associates
   () meeting/seminar
   () product review
   () MINISIS brochure/advertising material
   () other (please specify)

3) What products did you consider when you were selecting a software package for your information management needs?
   Place an "x" within the () to indicate answers.
   () Access
   () FoxPro
   () Informix
   () MINISIS
   () Oracle
   () Paradox
   () others (please specify)

4) What factors were the most important in your decision about the software to use for your information management needs?
Place a number in the () to indicate rating. Rate each factor on a scale of 1 to 5, with number 1 representing "very important" and number 5 "not important".
() cost
() ease of use
() availability of "off the shelf" applications
() ability to customize the software to suit own needs
() technical support
() multilingual capability
() availability on a PC-based platform
() availability of Windows version
() availability of WWW interface
() multi-media capability
() others (please specify and provide rating)

5) When you were making your decision, what sources of information were most important in forming your opinions about software products?
Place a number in the () to indicate rating. Rate each factor on a scale of 1 to 5, with number 1 representing "very important" and number 5 "not important".
() sales representatives/agents
() colleagues/associates
() meeting/seminar
() product reviews
() brochure/advertising material
() hands-on demonstration
() other (please specify)

NOTE:
If MINISIS chosen, ask questions 7 to 19.
If another software product chosen, ask questions 6, 8, 9, and 19.

6) If you did not select MINISIS, what database management software did you select? What were the main reasons for making this choice?
Software chosen:
Main reasons for choosing this software:

7) If you chose MINISIS, what were the main reasons for making this choice?
Main reasons:

8) In your experience, does MINISIS do things that other products cannot do?
() yes
() no
() don't know

If answer is "yes", what is this capability and what contribution has it made to your work?

Capability:
Contribution made to work:

9) In your experience, is MINISIS unable to do things that other products can do?
() yes
() no
() don't know

If answer is "yes", what is this capability and what contribution could it have made to your work.
Capability:
Contribution could have made to work:

10) How well do you think that MINISIS meets your current information management needs?
Indicate reply with a number from 1 to 5, with 1 representing "very well" and 5 representing "not well".
Rating (1 to 5):

11) Did the fact that MINISIS was associated with IDRC influence your decision to use the software?
() yes
() no
() don't know
If answer is "yes", in what way did this influence your decision?

12) What applications do you currently run using MINISIS?
Place an "x" within the () to indicate all uses that are applicable.
() archive management
() library management
() museum management
() records management
() project information management
() inventory management
() others (please specify)

13a) Do you use MINISIS to provide access to your organization's information through the World Wide Web (WWW)?
() yes
() no
() don't know

13b) If answer is "yes", how well has this worked? Indicate reply with a number from 1 to 5, with 1 representing "very well" and 5 representing "not well".
Rating (1 to 5):

13c) Please briefly describe how making information available on the WWW through MINISIS has changed how your organization now works.

14) How important do you think that a WWW interface will be to your future uses of MINISIS? Indicate reply with a number from 1 to 5, with 1 representing "very important" and 5 representing "not important".
Rating (1 to 5):

15) Do you think that MINISIS will be able to handle your future needs with respect to the WWW and the Internet?
() yes
() no
() don't know
How?

16a) Have you used technical support for MINISIS?
() yes
() no
() don't know

16b) If answer is "yes", what was the source of the technical support that your received?
() MINISIS Resource Centre
() IDRC (toll-free telephone)
() On-site visit
() other (please specify)

16c) How would you rate the support that you received?
Indicate reply with a number from 1 to 5, with 1 representing "very good" and 5 representing "very poor".
Rating (1 to 5):

17) What has MINISIS allowed your organization to do that it could not do before?

18) What else would you like to be able to do with MINISIS that you cannot currently do?

19) Do you have anything else to add?

IDRC Staff Interview Guide

I have been asked to collect information that will help determine the nature of the Centre's future involvement with MINISIS. IDRC has supported the development of this software package since 1976 and needs to assess: the benefits that users receive from MINISIS; whether MINISIS continues to be relevant and effective; and how MINISIS might be developed to meet future needs.

Name:
Position:
Phone number:
Email address:

GENERAL KNOWLEDGE/UNDERSTANDING

1. How familiar would you say are you with MINISIS and what it can do?
   () not familiar
   () fairly familiar
   () very familiar

2. How did you first hear about MINISIS?

3. Have you had MINISIS and its features and potential uses explained to you?
   () yes () no, By whom?

   If no, have you read anything about MINISIS and its uses? What did you read?

4. Has it been useful to IDRC to have MINISIS in-house?
   () yes () no, Why? Why not?

5. In your view, for what types of things can MINISIS be used?

6. As far as you know, who are the users of MINISIS in the Centre?

7. As far as you know, who are the external users of MINISIS?

CENTRE INVOLVEMENT

8. In your opinion, does support for the development of software products such as MINISIS contribute to the fulfillment of IDRC's corporate objectives?
   () yes () no,

   If yes, how?
   If no, why do you say no?

9. Do you think that the Centre should continue to support MINISIS?
   () yes () no,

   If yes, under what circumstances would you say the Centre should provide support?
   If no, why not?

10. If IDRC decides to reduce or terminate support for MINISIS,
    - how should it go about this?

    - what should be done with MINISIS and the user network it has developed?

11. Over the years, MINISIS has been challenged to become self-financing. Is this a realistic goal?
    () yes () no, Why? Why not?

12. How do you have any practical ideas about how MINISIS could realistically become self-financing?

OWN WORK

13. As part of your activities at IDRC, do you use database applications?
    () yes () no, How?

    Have you considered MINISIS for this application? () yes () no
    Why? Why not?

    What software do you use?

14. As part of your activities at IDRC, do you make information available over the WWW?
    () yes () no, How?

    Have you considered MINISIS for this application? () yes () no
    Why? Why not?

    What software do you use?

15. Within the projects that you support, do any of them use database applications?
    () yes () no, How?

    Have you ever suggested they consider MINISIS for their application? () yes () no
    Why? Why not?

    What software do they use?

16. Within the projects that you support, do any of them make information available over the WWW?
    () yes () no, How?

    Have you ever suggested they consider MINISIS for their application? () yes () no
    Why? Why not?

    What software do they use?

17. Do you consider MINISIS to be a practical alternative to other database applications?
    () yes () no, Why? Why not?

18. Do you have anything else to add?

Appendix D: Questionnaire

Dear: (name)
(position)

I have been asked by the International Development Research Centre (IDRC) to collect information that will help IDRC determine the future direction of MINISIS. IDRC has supported the development of this software package since 1976. The importance of information management and communication continues to grow, and IDRC wants to determine the benefits that users receive from MINISIS, to understand the ways in which MINISIS continues to be relevant and effective, and to obtain input on how MINISIS can best meet the future needs of its users.

Your views and experiences are an important input to this study. I hope you will help by completing this short questionnaire. It should take you about 10 to 15 minutes to complete. All replies are confidential.

Please return the completed questionnaire to me:

Michael Graham (mgraham@achilles.net) by 6 November 1998.

Thank you for your assistance.

INTRODUCTION

This questionnaire is being sent to three groups of people: (1) those who are currently using MINISIS; (2) those who are past users of MINISIS; and (3) those who considered MINISIS but chose another software package. The questions are designed to help us understand the reasons behind your choice of software, the factors that influenced your decision, and, if you are a current or former MINISIS user, your experiences working with the software.

QUESTIONNAIRE

1) Please provide your name, title, telephone number (with country, area, and city codes as required), mailing address, and experience with MINISIS.
Name:
Title:
Phone:
Address:
Years of personal experience working with MINISIS:
Years that organization has used MINISIS:

2) How did you first hear about MINISIS?
Please place an "x" within the () to indicate your answer.
() MINISIS staff
() IDRC project staff
() colleagues/associates
() meeting/seminar
() product review
() MINISIS brochure/advertising material
() other (please specify)

3) What products did you consider when you were selecting a software package for your information management needs?
Please place an "x" within the () to indicate your answers.
() Access
() FoxPro
() Informix
() MINISIS
() Oracle
() Paradox
() others (please specify)

4) What factors were the most important in your decision about the software to use for your information management needs?
Please place a number in the () to indicate your rating. Rate each factor on a scale of 1 to 5, with number 1 representing "very important" and number 5 "not important".
() cost
() ease of use
() availability of "off the shelf" applications
() ability to customize the software to suit own needs
() technical support
() multilingual capability
() availability on a PC-based platform
() availability of Windows version
() availability of WWW interface
() multi-media capability
() others (please specify and provide rating)

5) When you were making your decision, what sources of information were most important in forming your opinions about software products?
Please place a number in the () to indicate your rating. Rate each factor on a scale of 1 to 5, with number 1 representing "very important" and number 5 "not important".
() sales representatives/agents
() colleagues/associates
() meeting/seminar

() product reviews
() brochure/advertising material
() hands-on demonstration
() other (please specify)

PLEASE NOTE:
If you chose MINISIS, please answer questions 7 to 19.
If you chose another software product, please answer only questions 6, 8, 9, and 19.

6) If you did not select MINISIS, what database management software did you select? What were the main reasons for making this choice?

Software chosen:

Main reasons for choosing this software:

7) If you chose MINISIS, what were the main reasons for making this choice?

Main reasons:

8) In your experience, does MINISIS do things that other products cannot do?
() yes
() no
() don't know

If you answered "yes", please indicate what this capability is and what contribution it has made to your work.

Capability:

Contribution made to work:

9) In your experience, is MINISIS unable to do things that other products can do?
() yes
() no
() don't know

If you answered "yes", please indicate what this capability is and what contribution it could have made to your work.

Capability:

Contribution could have made to work:

10) How well do you think that MINISIS meets your current information management needs? Please indicate your reply with a number from 1 to 5, with 1 representing "very well" and 5 representing "not well".

Rating (1 to 5):

11) Did the fact that MINISIS was associated with IDRC influence your decision to use the software?
Please place an "x" within the () to indicate your answer.
() yes
() no
() don't know

If you answered "yes", in what way did this influence your decision?

12) What applications do you currently run using MINISIS?
Please place an "x" within the () to indicate all uses that are applicable.
() archive management
() library management
() museum management
() records management
() project information management
() inventory management
() others (please specify)

13a) Do you use MINISIS to provide access to your organization's information through the World Wide Web (WWW)?
() yes
() no
() don't know

13b) If you answered "yes", how well has this worked? Please indicate your reply with a number from 1 to 5, with 1 representing "very well" and 5 representing "not well".

Rating (1 to 5):

13c) Please briefly describe how making information available on the WWW through MINISIS has changed how your organization now works.

14) How important do you think that a WWW interface will be to your future uses of MINISIS? Please indicate your reply with a number from 1 to 5, with 1 representing "very important" and 5 representing "not important".

Rating (1 to 5):

15) Do you think that MINISIS will be able to handle your future needs with respect to the WWW and the Internet?
() yes
() no
() don't know

How?

16a) Have you used technical support for MINISIS?
() yes
() no
() don't know

16b) If you answered "yes", what was the source of the technical support that your received?
() MINISIS Resource Centre
() IDRC (toll-free telephone)
() On-site visit
() other (please specify)

16c) How would you rate the support that you received?
Please indicate your reply with a number from 1 to 5, with 1 representing "very good" and 5 representing "very poor".

Rating (1 to 5):

17) What has MINISIS allowed your organization to do that it could not do before?

18) What else would you like to be able to do with MINISIS that you cannot currently do?

19) Do you have anything else to add?

Thank you.

Appendix E: Terms of Reference

This evaluation was conducted to provide input to the Senior Management Committee of IDRC, through the Vice-President of Resources, to help determine the nature of the Centre's future involvement with the MINISIS program.

Specifically, the consultant was requested to perform the following activities:

(a) to review the history and status of MINISIS;

(b) to seek information on:
- the relevance of MINISIS to the needs of external users;
- the factors that affect access to MINISIS in developing countries; and
- the synergy that exists with current Centre programs;

(c) to summarize:
- the advantages and disadvantages of MINISIS to external users (both in South and North);
- the relevance of MINISIS to IDRC programming;
- the advantages and disadvantages to MINISIS being housed within IDRC; and
- the issues that the Centre must address as it seeks to define its future relationship with MINISIS; and

(d) to submit to the Centre a detailed and satisfactory report of the work accomplished.