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20 February 1995
Original: ENGLISH

SUPPORT TO MINISTRY OF TRADE AND INDUSTRY

SI/NAM/94/804

NAMIBIA

Terminal report *

Prepared for the Government of Namibia
by the United Nations Industrial Development Organization
acting as executing agency for the United Nations Development Programme

Based on the work of Philip Geyer,
Expert Consultant: Data Base Design and Implementation

Backstopping Officer: Claude Carrier
Industrial Information Section

United Nations Industrial Development Organization
Vienna

* This document has not been edited.

ABSTRACT

Number of Project: SIS/NAM/94/804.
Title of Project: Assistance to complete the setting up and implementation of an Industrial and Technological Information System in the Ministry of Trade and Industry of the Republic of Namibia.
Duration of Project: Two months.
Corporate Author: United Nations Industrial Development Organisation (UNIDO).
Personal Author: Philip Geyer.

The objective of the project was to commission all the equipment previously purchased to operate a computerised information system (network) for receiving, processing, storing, retrieving, and disseminating information in accordance with demand for such information from SMIs.

The objectives were attained only to a limited extent. The exact purpose and target group(s) of the system were undefined, the Ministry experienced severe staff shortages, the network file server was not functioning properly and the original supplier (who had to undertake guarantee repairs) caused severe problems and delays within the project.

Due to these constraints and technical delays, the Consultant was obliged to focus on management and marketing planning and the preparation of action plans. A schedule of technical requirements (detailing additional equipment and work required on the computer system) and a plan of action (for implementing an information system) were prepared and are submitted herewith (see under RECOMMENDATIONS).

If the Ministry executes the action plan and ensures that the technical requirements are met, this should be sufficient for the successful completion of the project and establishment of a functioning information centre.

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EXPLANATORY NOTES

A. Currency

The Namibian Dollar had the official value of N\$ 3.50 against one United States Dollar at the date of preparation of this report, i.e. the equivalent value of N\$ 1.00 was US\$ 0.286 at that date.

B. Acronyms and Abbreviations

- BTI** - Board of Trade and Industry; statutory advisory body on trade matters
- CD-ROM** - Compact Disc Read-Only Memory; an opto-electronic medium for storage of large amounts of data on small, machine-readable disc
- CDS/ISIS** - Mini-micro CDS/IISIS; UNESCO's widely used data base management software package for storage and retrieval of textual (e.g. bibliographic) data
- CFTC** - Commonwealth Fund for Technical Co-operation; aid organisation within the Commonwealth Secretariat
- CSIR** - (South African) Council for Scientific and Industrial Research; provider of the WorldNet Gateway service, which allows subscribers to access a large number of international data bases through a local gateway
- DBA** - Data Base Aditor; a post created within the ITID
- GDP** - Gross Domestic Product
- INTIB** - Industrial and Technological Information Bank; UNIDO's data base providing data on international developments in technology
- ITID** - Industrial and Technological Information Division (in the Ministry)
- LAN** - Local Area Network; electronic computer communications network with a fixed number of nodes within a small area, usually a particular organisation
- MAN** - Metropolitan Area Network; electronic computer communications network with an extent of a few kilometres, i.e. within a city or part of it
- MTI** - Ministry of Trade and Industry of the Republic of Namibia
- N\$** - Namibian Dollar
- NDC** - Namibia Development Corporation; para-statal body with responsibility for development of entrepreneurship and small businesses
- NFP** - National Focal Point (of INTIB Data Providers)

- NGO – Non-Governmental Organisation
- NNCCI – Namibia National Chamber of Commerce and Industry; co-ordinating body of local and regional chambers of commerce
- PC – Personal Computer, a desk-top computing unit usually for the use of a single individual worker
- PTA – Organisation for the Preferential Trade Area for Southern and Eastern Africa; trade agreement organisation comprising nine Southern African states
- SACU – South African Customs Union; trade agreement organisation comprising South Africa, Botswana, Lesotho, Namibia and Swaziland
- SBDC – Small Business Development Corporation; South African NGO which develops entrepreneurship and small businesses
- SMI – Small- and Medium-sized Industry
- SSI – Small-scale Industry
- TINET – Trade Information Network, a data base provided by the PTA
- UNDP – United Nations Development Programme
- UNIDO – United Nations Industrial Development Organisation
- WAN – Wide Area Network; electronic computer communications network with an essentially unlimited geographic extent, nodes usually connecting on demand

INTRODUCTION

This report was prepared by Philip Geyer, Expert Consultant of the United Nations Industrial Development Organisation (UNIDO), who visited Windhoek, Namibia, and Johannesburg and Pretoria, South Africa, from 19 September to 3 November 1994. The purpose of the project was to assist the Industrial and Technological Information Division (ITID) in the Ministry of Trade and Industry (MTI) of Namibia to set up a data base of industrial and technological information.

During 1992, the Ministry had secured the support of the Commonwealth Fund for Technical Co-operation (CFTC), whose consultant prepared a report⁽¹⁾ recommending a number of technical and organisational implementations. The Ministry set up the Industrial and Technical Information sub-division and purchased the computer equipment, as recommended. CFTC support has been withdrawn since the start of implementation; to date only a small server-workstation network (LAN) has been completed. The Ministry forwarded a request in July 1994 to UNIDO for assistance in completing the setting up of the information system.

In terms of the UNIDO project definition, the tasks of the Consultant were :-

1. Complete the installation and commissioning of the computer system;
2. Provide training in the operation, management and maintenance of the system;
3. Provide expertise to formulate development and marketing plans in close co-operation with the Ministry of Trade and Industry, Chamber of Commerce, SMIs and international service providers;
4. Advise the Ministry on the developing of local capability in providing information services to SMIs and establishing external linkages with neighbouring countries, particularly with South Africa;
5. Visit institutions in Windhoek and Johannesburg to establish possible areas of co-operation and discuss exchange of information;
6. Install database software and data, if required;
7. Create gateways to international host databases, if required;
8. Prepare report to UNIDO on activities completed and possible future action.

As stated in the project document, it was clear that not all these tasks could be performed within the framework of the project. Furthermore, a number of objectives had to be revised or rescheduled during the course of work. Due to severe delays in delivery of the file server after repairs, final commissioning could not be performed and no data bases were installed. Due to the absence of staff, training sessions could not be held.

As a result, the Consultant was obliged to focus on management and marketing planning and the preparation of an action plan. A schedule of technical requirements (detailing additional equipment and work required on the computer system) and a plan of action (for the implementation of an information system) were prepared and are submitted as the RECOMMENDATIONS forming part of this report.

(1) The *Source Document* listed in the bibliography (Appendix B).

I. ACTIVITIES

A. Briefing

Upon arrival, the Consultant was briefed on the current status of the system by the official in charge of the project, Mr. Onesmus Upindi (who was also the Liaison Officer) and had discussions with the other staff of the Division and Sub-division. The Consultant sought to clarify the host government's requirements and expectations regarding the project, and obtained a schedule of required activities as perceived by the Ministry (see Appendix D). Meetings were also conducted with a number of other parties in order to gather background information (see Appendix G).

B. Equipment

The Ministry made it known that some of the hardware and software purchased were no longer on site and that the installation was physically incomplete. An inventory of equipment on hand was completed (Appendix E). The tender and delivery documents were traced and it was ascertained that full delivery had, in fact, been made. Nevertheless a number of items could not be found during the course of the mission.

A quotation was obtained from Punch Line Computers, the original supplier, for replacement of the missing items - this quote to be used as basis for cost comparisons. The Ministry was requested to purchase the outstanding items from another supplier of its choice as soon as possible.

The employee of Punch Line Computers who performed the original installation had not released the Novell NetWare supervisor password. Since the original software was missing, it was not possible to re-install NetWare and redefine the password. Agreement was reached with Punch Line Computers that they would install their own copy of NetWare at their expense, and the file server delivered to them on 7 October, to be returned on the morning of 10 October.

Since - unbeknownst to the Consultant or the Ministry - there was no qualified Novell technician at Punch Line Computers, the incorrect utility was used for this task. The result was that all data were deleted from the system and the boot track of the hard disc drive damaged. Consequently the disc drive had to be sent to the firm of Mustek Computers in Johannesburg for repairs, where it was incorrectly delivered on 10 October. It finally arrived at the Mustek workshop on 17 October and was returned on 20 October, but with the incorrect controller electronics. A suitable controller was despatched on 26 October and arrived on 28 October⁽²⁾. The operating system and network software were installed and the file server delivered to the Ministry on 3 November.

The Ministry was advised regarding the technical aspects of the modem connection, and the official application forms required for its installation on site were obtained and completed; the forms were forwarded to the Acting Director, who initiated the necessary arrangements.

(2) Dates confirmed by the General Manager of Mustek Computers (listed in Appendix G).

The requirement for and desirability of obtaining and installing a network printer were investigated and recommendations to the Ministry are included as part of this report.

C. Software and Data Bases

So far, no information audit has been performed. There was no clear definition of the nature, extent and mix of data to be collected, the expected user profile, the projected usage rate of the system, the information requirements of the Ministry's staff and that of other governmental departments and institutions.

As a result, the Ministry relied on the Consultant to recommend and, where possible, provide data bases and associated software. Although Dbase IV was available and the Ministry suggested it be installed in the Sub-division for internal use, there was no staff member with the necessary skills to programme or maintain it, and the Consultant advised against this course of action.

In a meeting on 20 October, it was therefore agreed with the Acting Director that the CDS/IEIS data base system, the INTIB Referral System, and the ABC-Europex data base would be installed during the course of the project. The acquisition of other data bases, principally on CD-ROM, was also mooted in this meeting, but it was agreed that this would have to be deferred until after completion of an information audit.

Due, however, to the extremely late return delivery of the file server, it was possible only to verify the installation of the operating system (MS-DOS) and network (Novell NetWare) software components. The data bases referred to above were left in the possession of the Ministry and arrangements made both for the installation of ISIS modules and for the provision of training by the User Group (see I.E., Skills and Training).

For the same reason, and also because substitute components to replace those missing had not been acquired by the end of the project period, none of the other software was installed on the file server. The Consultant was able to perform limited maintenance and re-organisation work on the three PC units attached to the LAN.

The applicability of the TINET data base provided by the Organisation for the Preferential Trade Area for Southern and Eastern Africa (PTA) was investigated.

D. Staffing

The post of Data Base Administrator was created in 1992 in response to the recommendations of the CFTC's consultant, but the post had not been filled. Although it is essential that the incumbent - who would have overall responsibility for the system - have an acceptable level of technical skill, the position may not offer sufficient scope for the full-time employment and career development of a professional. The Consultant was informed that a suitable candidate had been found and that the Division was proceeding with induction.

Mr Upindi obtained a transfer to the Ministry of Foreign Affairs as of 17 October, which left Mr Kasheeta, the research officer and librarian, as only staff member in the sub-division. The latter was unexpectedly sent overseas for several weeks as of 24 October in order to attend a librarians' computer training course.

The post of Deputy Director of the Division has also remained vacant since the death last year of Mr S. Mbako, the previous incumbent. The Division resorted under the Acting Deputy Director of Industrial Planning as a result.

E. Skills and Training

The Consultant was able to establish that the Ministry did not dispose of the staff or skills to administer a system such as was foreseen. It was ascertained in interviews with the administrative staff that the average level of general computer skills was relatively low.

It was also established that there are no research officers in the sub-division with formal training in any of the disciplines relating to the SSIs that the government is aiming to stimulate.

The shortage of high level skills in Namibia means that a DBA would have to undergo extensive orientation training after recruitment. The Prime Minister's Office estimated that the recruitment and induction of a technically competent person would take four to six months.

Due to the absence of staff members and the unavailability of the file server, it was not possible to schedule any training during the project. A meeting was held with Ms. Morgenstern, Co-ordinator of the CDS/ISIS Users' Group, to ascertain that training could be made available to the Ministry once the computer system has been completed to specification and the necessary staff appointed.

F. Focal Point

The Consultant was requested to make recommendations regarding the integration into the system of organisations such as the Namibia National Chamber of Commerce and Industry (NNCCI), the Namibia Development Corporation (NDC), the University of Namibia (UNAM), other ministries, government departments, etc.

From these researches it became clear that complete consensus had not been reached within the Ministry about the purpose the system was meant to serve, the information needs of the users, or exactly what data should be made available. The system was referred to as being for "internal use", and seemed to be perceived primarily as a cataloguing tool.

In order to resolve these questions, it was necessary to obtain preliminary information regarding the needs of the expected user population; in the absence of an information audit, this had to be done mainly through interviews. At the same time, the attempt was made to define the role of the system within the wider framework of the country's information needs on the one hand, and existing information resources on the other.

Within this context, several meetings were held with the staff of the NDC, which proved to be the information provider that had progressed furthest. It transpired that the NDC had approached UNIDO during 1993 to negotiate their nomination as an INTIB National Focal Point (NFP). Discussions had also taken place between officials of the Ministry and the NDC. On 29 April 1994, Messrs. P. Herlé, C. du Toit, W. Verdoes, and D. Karg of the NDC met with Messrs. L. Becker and S. Galloway of the Ministry. They were informed of the plans of the NDC, requirements were discussed, and the decision taken to proceed. On 9 May 1994, the implementation was discussed further and the priorities established as, firstly, investment tracking and the business operating climate and, secondly, document image processing of the entire existing archive.

In terms of UNIDO policy, the nomination of a NFP is the responsibility of the local government. So far, the NDC has not obtained such official confirmation from the Ministry.

The collection of data on the availability of information in Namibia is an important step in the general planning process. The NDC agreed to start with data collection of information centre profiles and undertook to forward the results to UNIDO.

From the discussions with the NNCCI, which uses mainly the TINET data, it was established that the Chamber is seeking funding for the appointment of a Research Officer to be responsible for market reports, and an Information Officer to handle trade enquiries.

G. Gateways

One of the project objectives was to obtain information from and conduct preliminary discussions with the WorldNet Gateway service of the South African Council for Scientific and Industrial Research (CSIR) and with other organisations within the Republic of South Africa who could conceivably provide information and/or access to data bases. Meetings were held with representatives of the CSIR in Pretoria and the Small Business Development Corporation (SBDC) in Johannesburg. The results of these discussions are reflected in the CONCLUSIONS and the RECOMMENDATIONS.

H. Administrative and Financial Planning

Possibly the most important aspect of the project plan was the formulation of a management plan in consultation with ITID staff. The task was complicated by the lack of an operating budget or financial plan, the movement and temporary absence of staff, and the uncertainty regarding the function of the Division.

The Consultant was obliged to draw up recommendations without the opportunity to discuss them with the people involved. Therefore, although these conclusions are included in the Action Plan as part of the RECOMMENDATIONS, the finalisation of this planning is urged as a matter of priority.

J. Marketing Planning

From discussions held with a substantial number of people both within and outside of the Ministry, a number of issues were identified in this area :-

- Little thought has so far been given to promoting the service.
- The funds are currently not available for marketing.
- No person with the necessary expertise to manage marketing could be identified within the Ministry.
- It appears that the needs of the formal sector, which plays an important sustaining role in the Namibian economy at present, have not been addressed sufficiently yet.
- Entrepreneurs and would-be entrepreneurs have very little contact with the Ministry, and no suitable channels exist for contact with them in urban or semi-urban areas, although a good opportunity for such contact in rural areas appears to exist via the regional offices.
- There is no mechanism for collecting subscriptions and/or search fees.
- The Government may be reluctant to sanction the collection of payment for such a service.

II. OUTPUTS

A. Advice to the Ministry on Developing Local Capability and Establishing International Linkages

In the absence of an information audit, it was difficult to advise the Ministry on the correct course to follow for developing the capability to provide information. In addition to this audit, data on the availability of information in Namibia should also be collected – this process has been initiated by the NDC. Using this information, it should be possible to define the role of the Ministry's system in the context of the country's information needs as a whole. Ideally, this would result in a cohesive information strategy and the avoidance of duplications.

From the discussions with the staff of the WorldNet Gateway service at the CSIR, it would appear that this service could be of great value. It offers large cost savings compared to direct subscription to and searches of international data bases, since search criteria are parsed and optimised locally before the connection is established. WorldNet Gateway should be subscribed to at a later stage, when the internal organisation of the Division has been completed. The expertise of the CSIR could also be employed on an *ad hoc* basis.

B. Commissioning of Equipment and Loading of Data

Due to severe delays in delivery of the file server after repairs, final commissioning could not be performed and no data bases or other software were installed on the file server. A schedule of technical requirements, detailing additional equipment and work required on the computer system, are submitted in the Action Plan. This should be done by an appointed vendor, a local consultant, by the DBA after his appointment, or a combination of these.

The CDS/ISIS data base system, the INTIB Referral System, and the ABC-Europex data base were left in the possession of the Ministry for later installation. The PTA's TINET data base, already in the possession of the Ministry, has applicability and should also be installed.

C. Staff Training

Due to the absence of staff members and the unavailability of the file server, it was not possible to schedule any training during the mission. It was ascertained, however, that training could be made available by the Namibian CDS/ISIS Users' Group once the computer system has been completed to specification and the necessary staff appointed.

Attention should also be given to training workshops for all users of computer equipment in order to expand computer literacy and increase user confidence. The CDS/ISIS Users' Group is able to provide such training as well, as are a number of development NGOs in Namibia.

The recommendations regarding a staff training programme are included in the Action Plan.

III. CONCLUSIONS

It is vital that a cohesive information strategy be devised on a national basis. As many of the other information providers in Namibia as possible should be involved in this process, which implies that a workshop would probably be most productive. Agreement on the tasks and responsibilities of each party should form part of this strategic planning.

It is apparent that the information providers should be clear about their own mission and purpose and the information needs of their users, before such planning can take place. Equally, data on the availability of information in Namibia, currently being collected by the NDC, is vital to the general planning process.

It is the Consultant's carefully considered opinion that a National Focal Point should be set up at the NDC, with the ITID of the Ministry as a node. The ITID would have the responsibility of collecting and maintaining certain important governmental data, such as import and export figures, in addition to the data it supplies from its own activities. In this way it could act as a centralised contact point for other information users with respect to such information.

The NDC has a well-developed and well-staffed Information Systems Division, equipped with mainframe and personal computers and Local Area Networks. The NDC Information Centre, at the moment essentially a library, is manned by an enthusiastic and dedicated research officer. The NDC has made clear its intention of proceeding with setting up computerised data bases to provide industrial, technological and marketing information, regardless of other developments.

Other organisations, (e.g. the NNCCI, University of Namibia, National Agricultural Information Centre, Government Library, and other ministries) should also be organised as nodes.

We cannot stress too much the need for the head of the service to be an active, independent net-worker and seeker of information. The information and research officers should have training in library science as well as technical training in one or more of the disciplines relating to the SSIs that the government is aiming to stimulate. Emphasis should not be just on the cataloguing of information, but also on promotion of the service, understanding of the clients' unique needs (which they themselves may be poor at articulating) and imagination and persistence in the ferretting out of the required material.

As far as sustainability and funding are concerned, attention should be given to obtaining funds allocated from the South African Customs Union (SACU) contributions, which are intended for industrial development. To reduce the load of administration and simplify fee collection, initial access to the service by individuals could be free of charge, with fees being charged for repeated use and for use by corporate clients. Nevertheless Government shall have to provide financial support for most of the expenses and the running costs.

If the Ministry executes the Action Plan and develops into a functioning information centre, its vision can be expanded to the national level, where it can play a vital supporting role.

RECOMMENDATIONS

Due to the constraints and delays experienced during the mission, a certain amount of work remains to be done. This can be completed by the Ministry or its appointed agents according to the recommendations set out below.

A. Action Plan

This plan details the steps still to be taken by the Ministry in order to complete the implementation of its information system.

Staffing & Training

- Attend to the staffing of vacant posts as a matter of urgency.
- Attend to the recruitment of suitably qualified information officers.
- Provide training in Library Management for information officers who require it.
- Conduct Computer Literacy training for all staff.
- Conduct CDS/ISIS training, both initial and ongoing, for all staff.

Focus

- Define the target population as clearly as possible.
- Formulate a mission statement for the Division.
- Formulate a statement of objectives for the Division.
- Define which data bases are required to meet the objectives and acquire them.
- Conduct an information audit.
- Take part in the survey of information providers.

Equipment

- Contract with a new vendor to complete the computer system.
- Arrange for the installation of the data bases provided.
- Identify those existing documents to which on-line access will be required.
- Scan the identified documents into the computer system for on-line access.

General

- Purchase publications, especially handbooks, related to information centres, as recommended by the CFTC consultant, from UNIDO or other publishers.
- Implement mechanisms for the collection of search fees.
- Implement library catalogue of literature using CDS/ISIS and, possibly, GOV.

Future

- Subscribe to the WorldNet Gateway service of the CSIR.

B. Technical Requirements

This schedule details the additional equipment and work required for completion of the computer system. The Ministry's best option would be to appoint a reliable vendor who can supply, install and commission the equipment and perform such other tasks as are required.

Workstations (PCs)

- Clean all units and adjust monitor settings (focus, astigmatism, etc.).
- Service (clean and re-align) all existing removable disc drives.
- Standardise on 3½" 1.44 Mb removable disc drives.
- Set up a uniform directory structure on all units, with emphasis on a shallow tree (not too many sub-directories) and separation of programs and data.
- Ensure that the complete MS-DOS operating system is installed on all units.
- Ensure that all units have the same (latest) version of MS-DOS installed.
- Install the same (latest) version of MS Windows on all units.
- Standardise the *autoexec.bat* and *config.sys* files on all units as far as possible.
- Copy all configuration files to a *\config* directory and back up on removable disc.
- Draw up and maintain a schedule of the software installed on each unit.
- Eliminate single-user software as far as possible; network licences of software should be purchased in future.
- Move all data currently stored on the workstations to the *user* volumes on the file server.
- Standardise the *lastdrive* setting on all units, to avoid "missing drive syndrome" problems when an employee uses a colleague's PC.

File Server

- Purchase and, where applicable, install the missing equipment :-
 - Irwin 4100M tape streamer unit 250 Mb (or equiv. – but card is Irwin).
 - Bitfax/SR program discs and manual(s) for Fastlink modem.
 - HP ScanJet IIP user's manual.
- Ensure applicability and suitability of the NetWare configuration.
- Make backups of the NetWare configuration files on removable disc.
- Attach and commission the existing modem.
- Install and commission the existing CD-ROM drive.
- Install software for the existing flatbed scanner.
- Attach and commission the existing flatbed scanner.
- Purchase and install a separate hard disc drive for scanned documents.
- Create *user* volumes organised by work group (library, admin, stats, etc.).
- Separate old data files out of the *user* volumes, archive to tape, and delete.
- Create complete system backup of file server on tape.
- Create separate backup of data files on the file server on tape.
- Implement a backup schedule comprising a full data backup every week and an incremental backup every day, and ensure that it is adhered to.
- Exercise strict control over access to the server.

Other

- Extend network to Director's, Secretary's and Statisticians' offices.
- Acquire a network laser printer to be placed in the secretary's office or other accessible location. A printer with ceramic drum is strongly recommended, on the grounds both of cost effectiveness and organisational considerations.
- Define which CD-ROM data bases suit the system's purpose and acquire them.
- Renew subscription to the TINET data base and install.

APPENDIX A
JOB DESCRIPTION

- Title:* Expert on Data Base Design and Implementation.
- Duration:* 2 months.
- Date Required:* As soon as possible.
- Duty Station:* Windhoek, Namibia and Johannesburg, South Africa.
- Purpose of Project:* To complete the installation and commissioning of equipment supplied by the Commonwealth Fund for Technical Co-operation (CFTC), for the purpose of operating a computerised networked information system for receiving, processing, storing, retrieving, and disseminating information, according to demand for such information from SMIs.
- Duties:*
1. Complete the installation and commissioning of the computer system;
 2. Provide training in the operation, management and maintenance of the system;
 3. Provide expertise to formulate development and marketing plans in close co-operation with the Ministry of Trade and Industry, Chamber of Commerce, SMIs and international service providers;
 4. Advise the Ministry on the developing of local capability in providing information services to SMIs and establishing external linkages with neighbouring countries, particularly with South Africa;
 5. Visit institutions in Windhoek and Johannesburg to establish possible areas of co-operation and discuss exchange of information;
 6. Install database software and data, if required;
 7. Create gateways to international host databases, if required;
 8. Prepare report for UNIDO on activities completed.
- Qualifications:* Tertiary qualification in Information Systems, with several years of practical experience in commercial computing systems, as well as several years of experience in the providing of consulting services.
- Language:* English.
- Background Information:* The Namibian Ministry of Trade and Industry forwarded a request in July 1994, asking UNIDO for assistance in setting up an information system. The Ministry had set up an Industrial and Technical Information sub-division and secured support of the Commonwealth Fund for Technical Co-operation (CFTC), whose consultant prepared a report and initiated the purchase of computer equipment for storage and retrieval of data. This support has since been withdrawn, and to date only the server and three workstations have been networked. The implementation is incomplete and the Ministry requires expert support and the transfer of skill to complete it.

APPENDIX B
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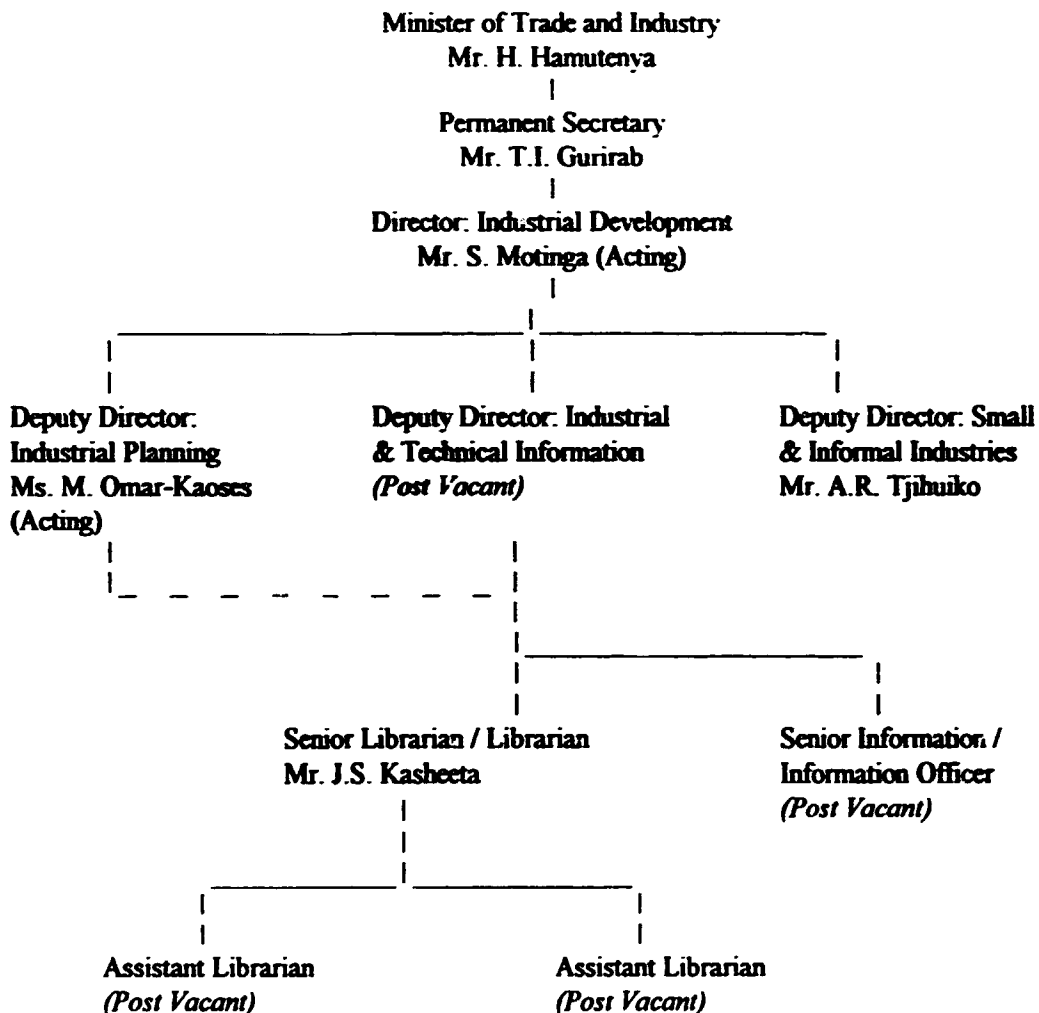
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General

Investigation of a Proposed Scheme for Booking Informal Tourist Accommodation in the Cape Peninsula, Republic of South Africa.

Thesis by Muriel Groux, Maîtrise de Langues Etrangères Appliquées, Université de Paris IV Sorbonne, Paris; September 1991. (*Background on economics of tourism*).

APPENDIX C
ORGANISATIONAL CHART OF THE ITID



APPENDIX D

"Clarification of Assistance Required from Consultant"

Note: This is a transcript of the original document received from the Ministry when it was requested by the Consultant to clarify the objectives and expectations. It includes changes agreed upon between the Consultant and Mr. Upindi, the author.

1. INSTALLATION OF BOTH SOFTWARE AND HARDWARE

This entails the installation of hardware equipment such as modems, scanner, etc. so that such equipment could be used for the purpose for which they were bought. This task includes also the installation of software which is available and not installed, if any, or advice on which is the appropriate software for the network system to be operational. The final objective is to have the network operational and have relevant databases. The need to purchase the required software and hardware equipment should be presented to the Director for his consideration.

2. PARTICIPATION OF OTHER NATIONAL ORGANISATIONS

The feeling in the Subdivision is that it is of paramount importance that the following directorates and institutions be involved from the beginning. Discussions with these institutions could not be pursued earlier as there was no technical person on the Ministry side to talk to other technical personnel of those institutions.

- a) Namibia Development Corporation (NDC): Information Department;
- b) Bank of Namibia (Central Bank): Information Department;
- c) The University of Namibia (UNAM): Information Department. Here we should explore the possibility of establishing a gateway through UNAM's E-mail system;
- d) Namibia National Chamber of Commerce and Industry (NNCCI);
- e) Ministry of Finance: Customs & Excise Department. This Department is important in providing the Ministry of Trade and Industry with import and export figures;
- f) Office of the Prime Minister, for obtaining technology guidelines;
- g) Should time allow, any other identifiable organisation which is of importance to the operations of the Ministry.

3. INSTALL DATABASE SOFTWARE AND DATA

This entails the installation of available database software. In this case the Small and Informal Industry Division will be requested to make available Dbase IV software for installation. The Ministry of Education should also be contacted for the possibility of obtaining the UNESCO CDS/ISIS software for installation. The UNIDO consultant may also give his advice against or for these proposals.

4. CREATE GATEWAYS TO INTERNATIONAL HOST DATABASES

This involves undertaking connections to various hosts which offer relevant information regarding Ministry operations. This exercise is costly and can only be undertaken after careful consideration. It should be discussed at high level in the Ministry. The target host databases are CSIR, Dialog, etc. The recommendations of the Consultant would be welcomed.

5. It is important to note that the Subdivision is more interested in seeing the network operating within the Ministry before "foreign ventures", i.e. connections to both national institutions and international host databases.

APPENDIX E
ITID INVENTORY AS OF 3 OCTOBER 1994

<u>GRN</u>	<u>ITEM</u>	<u>TYPE</u>	<u>SERIAL #</u>	<u>NOTE</u>
XT 1/1	Mecer File Server	none	none	
BR 1/5	Mecer Monitor	14" SVGA	H9333E04340	
BR 1/5	Keyboard	MCK2015X	9251992	
-	EISA Configuration Drivers	2x 5 1/4"	ECU 63345	
AM 1/3	HP ScanJet IIP	C1790A	3201J61728	(1)
-	Deskscan Windows Software	4 x 3 1/2"	-	
-	Deskscan Windows Software	2 x 5 1/4"	-	
-	Photofinish Optional Software	2 x 3 1/2"	-	
-	Photofinish Optional Software	1 x 5 1/4"	-	
-	ZSoft Photofinish user guide	-	-	
TX 1/1	Fastlink UHS Modem	96/14400SMV	930031283	
-	BitCom Program Disc	1 x 5 1/4"	82002928	
-	Bitfax/SR " " 1/2	1 x 5 1/4"	014363	(2)
-	Fastlink Complimentary Software V 1.0	2 x 5 1/4"	-	
-	Lasermate CD-ROM Drive	CR-501-B	KB2Y07008420	(3)
-	Lasermate CD-ROM Caddy	-	-	
-	Compro Multimedia CD	-	-	
-	2 x CD-ROM cases	-	-	
-	Lasermate Installation Disc	Int/Ext-02	-	
-	Tape Controller card & cable	Irwin 4100M, 1Mb	08-8-80000002	(3)(4)
-	Dual Serial Port Card	Unique	VF 002	
-	AUVA HT18.EMS Driver "151"	1 x 5 1/4"	-	
-	TVGA 8900 Driver/Utility "150"	2 x 5 1/4"	-	
-	Microsoft MS-DOS 5.0 3 x 3 1/2	-	-	(1)
-	Microsoft MS-DOS 5.0 2 x 3 1/2	-	-	(2)
-	Microsoft Windows 3.1 7 x 3 1/2	0012567	-	
-	Novell Netware 3.11	20-User, 5 1/4"	6164706	(5)(6)
-	Norton PC-Anywhere V4.5	2 x 3 1/2"	87512	

NOTES

- (1) No handbooks
- (2) Disc 2 missing
- (3) For Installation in File Server
- (4) Tape drive missing
- (5) Software (discs) missing
- (6) Installation guide missing

APPENDIX G
INSTITUTIONS AND INDIVIDUALS CONSULTED

Namibian Ministry of Trade and Industry (MTI), Private Bag 13340, Windhoek

Code: +264 +61 Tel: 22 9933 Fax: 22 0227

Mr. T.I. Gurirab	Permanent Secretary.
Mr. W. Honiball	Acting Permanent Secretary.
Mr. L. Becker	Chairman, Board of Trade and Industry. (Tel. 23 9032)
Mr. S. Motinga	Acting Director, Industrial Development Division.
Mr. A.J. Tjihuiko	Deputy Director: Small and Informal Industries, Industrial Development Division.
Mr. O.K. Upindi	Senior Industrial Economist, Industrial and Technological Information Sub-division – <i>officer in charge of the project, and Liaison Officer to the Consultant.</i>
Mr. J.S. Kasheeta	Senior Development Planner, Industrial and Technological Information Sub-division – <i>officer in charge of the library.</i>

Office of the Prime Minister, Government Buildings, Robert Mugabe Avenue, Windhoek

Code: +264 +61 Tel: 287 9111

Mr. C. Viljoen Acting Assistant Director, Computer and Data Services.

UNDP, Private Bag 13329, Windhoek

Code: +264 +61 Tel: 22 9220 Fax: 22 9084

Mr. A. Guindo	Acting Resident Representative.
Mr. F. Reske-Nielsen	Assistant Resident Representative (Programme).
Ms. E. Merz	Junior Professional Officer (UNIDO).

South African High Commission, Nelson Mandela Avenue, Windhoek

Code: +264 +61 Tel: 22 9765

Mr. Jordaan Trade Attaché.

Namibia National Chamber of Commerce and Industry (NNCCI), PO Box 9355, Windhoek

Code: +264 +61 Tel: 22 8809 Fax: 22 8009

Mr. H. Nghinamwaami Head: Trade and Marketing.

Namibian Development Corporation (NDC), Private Bag 13252, Windhoek

Code: +264 +61 Tel: 30 6911 Fax: 23 3943

Mr. A. Botes	Managing Director and Chief Executive Officer.
Mr. I. Namaseb	Industrial Development Manager.
Mr. D. Karg	Chief: Information Services.
Mr. P. Herlé	Manager: Supportive Services.
Ms. E. Coetzee	Information Department.

Punch Line Computers, PO Box 30366, Windhoek

Code: +264 +61 Tel: 23 8520 Fax: 22 6077

Ms. M. Le Riche	Sales Manageress.
Mr. T. Dawson	Technical Manager.

Mustek Computers, Johannesburg
Code: +27 +11 Tel: 444 6376
Mr. Dean Barkhuizen General Manager.

InfoScience Computers, Windhoek
Code: +264 +61 Tel: 23 1720
Mr. Botha Director.

Information Services Division of the South African Council for Scientific and Industrial Research (CSIR), PO Box 395, Pretoria, ZA-0001 South Africa
Code: +27 +21 Tel: 841 3007 Fax: 841 3604

Ms. R. McGillivray Manageress, Worldnet Gateway.
Mr. E. Evans Manager, International Marketing, Worldnet Gateway.
Mr. C. Maluleke Account Executive, Worldnet Gateway.
Mr. J. van Wyk Manager, Electronic Publishing and Indexing, InfoAccess.

Namibian CDS/ISIS User's Group, PO Box 1946, Windhoek
Code: +264 +61 Tel: 293 3108/9 Private: 4 2124
Ms. R. Morgenstern Co-ordinator.

ANNEX
Other Names for Future Reference

Namibian Ministry of Trade and Industry (MTI)

Mr. H. Hamutenya Minister.
Mr. W. Emvula Deputy Minister.
Mr. S. Galloway Deputy Director, Directorate of Investment Promotion.

Office of the Prime Minister

Ms. Hamutenya Director, Computer and Data Services.

The Secretariat of the Preferential Trade Area of Southern Africa, Lusaka

Mr. Demissie Director: Trade and Customs Division.
Mr. Jimmy Pittchar Manager: TINET.

South African High Commission

Mr. A Eckhardt High Commissioner.

Namibian Development Corporation (NDC)

Ms. A. Shiweda Agricultural Development Manageress.

Bank of Namibia (Central Bank)

Information Department

University of Namibia (UNAM)

Informatics Department

Ministry of Finance

Customs & Excise Department (import and export figures)