



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org



FINAL REPORT

19121

ON

PHASE - I OF DEVELOPMENT AND OPERATION OF INDUSTRIAL INFORMATION SYSTEM

SUBMITTED TO

UNITED NATIONS DEVELOPMENT
ORGANIZATION

BY

THE CONSULTING CENTER FOR FINANCE AND INVESTMENT
D. HAJJAH, 1411

JUNE, 1991



TABLE OF CONTENTS

1. INTRODUCTION
2. IDENTIFICATION OF USER REQUIREMENTS FOR DEVELOPMENT OF INDUSTRIAL INFORMATION SYSTEM
3. DEVELOPMENT OF CONCEPTUAL INDUSTRIAL INFORMATION SYSTEM
4. PREPARATION OF COMPUTER SYSTEM SPECIFICATIONS
5. PREPARATION OF BID DOCUMENT FOR PURCHASE OF COMPUTER SYSTEMS
6. EVALUATION OF PROPOSALS RECEIVED FROM THE VENDORS
7. ORGANIZATION STRUCTURING OF COMPUTER DEPARTMENT
8. SUPERVISION AND ACCEPTANCE OF COMPUTER SYSTEM INSTALLATION
9. ACCEPTANCE TEST REPORT

1. INTRODUCTION



1. INTRODUCTION

The Consulting Center for Finance and Investment provided consultancy services to United Nations Development Organization in carrying out Phase-I of the project on Development and Operation of Industrial Information System for Ministry of Industry and Electricity.

Following main tasks were performed during this phase:

- i) Identification of user requirements for development of Industrial Information System.
- ii) Development of Conceptual Industrial Information System
- iii) Preparation of Computer System Specifications
- iv) Preparation of bid document for purchase of computer systems
- v) Organization structuring of Computer Department
- vi) Supervision and acceptance of Computer System Installation
- vii) Acceptance Test Report.

Detailed reports were submitted at the end of each of these tasks. Annexures are enclosed alongwith, which provide the outline of these reports. Following sections give brief summary of each of these tasks.

**2. IDENTIFICATION OF USER REQUIREMENTS
FOR DEVELOPMENT OF INDUSTRIAL
INFORMATION SYSTEM**



2. IDENTIFICATION OF USER REQUIREMENTS FOR DEVELOPMENT OF INDUSTRIAL INFORMATION SYSTEM

Information requirements of all MIE Departments were studied by interviewing all concerned personnel. The objective of interviewing was to understand the activities of each of the Department, their information needs, need for computerizing the routine work, intra-departmental and inter departmental information flow.

Ministry of Industry and Electricity consists of three agencies, Industrial Affairs Agency, Financial and Administrative Affairs Agency and Electrical Affairs Agency. The information requirements of each of these agencies are presented below.

Requirements of Industrial Affairs Agency

Information requirements were presented in the order of Departments.

Industrial License Department

Industrial License Department needs information about products, factories, industrial licenses, imports, investors, exemptions, license follow up details.

Industrial Cities Department

Industrial Cities Department needs information about factories, follow up details for implementation of projects, allocation of land, management of land contract.



Engineering and Projects Department

Engineering and Projects Department needs information about monitoring of maintenance of industrial cities, billing for maintenance of industrial cities, maintenance of buildings, maintenance of facilities, preventive maintenance, storage and retrieval of engineering drawings.

Protection and Encouragement Department

Protection and Encouragement Department needs information about licenses, products, factories, assessment of value added, manpower employed, dumping policies, SASO specifications, exemptions, imports, protected products, commercial agreements, gulf factories, international exhibitions and trade fairs.

Industrial Statistics Department

Industrial Statistics Department needs information about licenses, factories, exemptions, tools for doing statistical research.

Foreign Capital Investment Bureau

Foreign Capital Investment Bureau needs information about joint venture projects, foreign countries, imports and exports, commercial agreements, exemptions, follow up details for joint/foreign venture projects.

Export Promotion Department

Export Promotion Department needs information about country profile, imports and exports, factories, commercial agreements, access to Export Development Center at Chamber of Commerce.



Requirements of Financial and Administrative Agency

Information requirements are presented in the order of Departments.

Financial and Administrative Affairs Department.

Financial and Administrative Affairs Department needs following information systems to meet their requirements.

- General ledger system
- Tenders and procurement system
- Stores inventory control system
- Budget control system
- Fixed assets accounting system.

Personnel and Payroll Department

Personnel and Payroll Department needs a Personnel Information System and a Payroll System.

REQUIREMENTS OF ELECTRICAL AFFAIRS AGENCY

Information requirements are presented in the order of Departments

Studies and Statistics Department

Studies and Statistics Department needs information on statistics of power generation and distribution, computer tools to analyze efficiency of power transmission and load distribution.



Companies Finance Control Department

Companies Finance Control Department needs a database of electrical companies to store their financial details and subsequently analyze the performance of these companies.

Companies Technical Control Department

Department needs following systems:

Documents storage and retrieval system

Maintenance of design tables

CAD package

Access to network of electrical companies

Access to international networks.



THE CONSULTING CENTER
FOR FINANCE AND INVESTMENT
Dr. Abdulaziz M. Dukheil

REPORT ON

**IDENTIFICATION OF USER REQUIREMENTS
FOR DEVELOPMENT OF
INDUSTRIAL INFORMATION SYSTEM**

PRESENTED TO

**UNITED NATIONS INDUSTRIAL
DEVELOPMENT ORGANIZATION**

PREPARED BY

THE CONSULTING CENTER FOR FINANCE AND INVESTMENT

SHABAN 1409

APRIL 1989



TABLE OF CONTENT

	PAGE
PREAMBLE	1
1. INTRODUCTION	2
2. USER REQUIREMENTS	4
2.1 H. E. MINISTER'S OFFICE	5
2.2 H. E. DEPUTY MINISTER'S OFFICE	8
2.3 DEPUTY MINISTRY OF INDUSTRIAL AFFAIRS	9
2.3.1 INDUSTRIAL LICENSE DEPARTMENT	10
2.3.2 INDUSTRIAL CITIES DEPARTMENT	16
2.3.3 ENGINEERING AND PROJECTS DEPARTMENT ..	19
2.3.4 PROTECTION AND ENCOURAGEMENT DEPARTMENT	23
2.3.5 INDUSTRIAL STATISTICS DEPARTMENT	27
2.3.6 FOREIGN CAPITAL INVESTMENT BUREAU	30
2.3.7 EXPORT PROMOTION DEPARTMENT	34



2.4	DEPUTY MINISTRY OF FINANCIAL AND ADMINISTRATIVE AFFAIRS	37
2.4.1	FINANCIAL AFFAIRS DEPARTMENT	37
2.4.2	PERSONNEL AND PAYROLL DEPARTMENT	38
2.5	DEPUTY MINISTRY OF ELECTRICAL AFFAIRS	39
2.5.1	STUDIES AND STATISTICS DEPARTMENT	39
2.5.2	COMPANIES FINANCE CONTROL DEPARTMENT ..	40
2.5.3	COMPANIES TECHNICAL CONTROL DEPARTMENT	40
2.6	PLANNING ORGANIZATION AND BUDGETING ...	41
2.7	PUBLIC RELATIONS OFFICE	41
2.8	REQUIREMENTS OF UN EXPERTS	42
3.	DISCUSSION	47

* * * * *

**3. DEVELOPMENT OF CONCEPTUAL
INDUSTRIAL INFORMATION
SYSTEM**



3. DEVELOPMENT OF CONCEPTUAL INDUSTRIAL INFORMATION SYSTEM

Industrial Information System will consist of four main databases, namely,

- Licensed Industrial Database
- Licensed Non-industrial Database
- Product Market Database
- Country Profile Database

THE LICENSED INDUSTRIAL DATABASE

The licensed Industrial Database will contain information about all the licensed industrial factories including local, joint or foreign venture factories. The information about operating as well as non-operating factories is maintained in the database.

The information relates to all the aspects of an industrial factory such as its identification details, industrial activity, licensed capacity, license follow up details, installed capacity, raw materials, machinery, manpower, land and buildings details, water and electricity, actual production, financial details, exemptions details, sales information and export activity.

Currently, there are approximately 2000 factories. Maximum expected growth rate is approximately 200 factories per year. The database will maintain the data for each of the factory over the last five years.



THE LICENSED NON-INDUSTRIAL DATABASE

The information about joint or foreign venture non-industrial projects is separately maintained in the Licensed Non-industrial Database.

The information consists of license number, name of establishment, commercial registration number, non-industrial activity, legal status, distribution of project capital, financial details and follow up information.

Currently, there are approximately 200 non-industrial establishments. Expected growth rate is 20 establishment per year. Information will be maintained for the last five years.

THE PRODUCTS MARKET DATABASE

The Products Market Database will have the information about all the products manufactured locally as well as imported. The database will maintain the information relating to the market demand of the product, local market price, whether protected or not, customs duty rate, raw materials used in manufacturing the product, export and re-export details.

There are about 2500 products that are imported, exported, or re-exported from/to 60 different countries. The increase in number of products will be marginal. The data will be maintained for the last 5 years.



THE COUNTRY PROFILE DATABASE

The database will contain the valuable information about foreign countries with which Kingdom has got economic and commercial relations. This information will assist in identifying the potential for exports or for encouraging joint ventures viz-a-viz controlling dependence on the imports.

The database will contain information about maximum of 150 countries. The historical information will be maintained for the last five years.



REPORT ON
CONCEPTUAL INDUSTRIAL INFORMATION
SYSTEM

PRESENTED TO
UNITED NATIONS INDUSTRIAL
DEVELOPMENT ORGANIZATION

PREPARED BY
THE CONSULTING CENTER FOR FINANCE AND INVESTMENT

RAMADAN 1409

APRIL 1989



TABLE OF CONTENT

	PAGE
PREAMBLE	1
1. INTRODUCTION	2
2. INDUSTRIAL AFFAIRS AGENCY	3
2.1 OBJECTIVES	3
2.2 DEPARTMENTS OF INDUSTRIAL AFFAIRS AGENCY	3
2.3. BRIEF LIFECYCLE OF THE PROJECT OF ESTABLISHING A FACTORY	4
2.4. INFORMATION REQUIREMENTS	7
2.4.1. INDUSTRIAL LICENSE DEPARTMENT	7
2.4.2. THE GENERAL SECRETARIAT OF FOREIGN CAPITAL INVESTMENT COMMITTEE	14
2.4.3. INDUSTRIAL CITIES DEPARTMENT	19
2.4.4. ENGINEERING AND PROJECTS DEPARTMENT ..	22



2.4.5.	INDUSTRIAL PROTECTION AND ENCOURAGE- MENT DEPARTMENT	24
2.4.6.	EXPORT PROMOTION DEPARTMENT	34
2.4.7.	INDUSTRIAL STATISTICS DEPARTMENT	35
3.	CONCEPTUAL INDUSTRIAL INFORMATION SYSTEM	38
3.1.	LICENSES DATABASE	38
3.2.	ESTABLISHMENTS DATABASE	39
3.3.	PRODUCTS DATABASE	40
3.4.	FOREIGN COUNTRIES DATABASE	42
3.5.	THE SUB-SYSTEMS OF IIS	47
3.5.1.	LICENSE DATABASE MAINTENANCE SUB- SYSTEM (LDMS)	48
3.5.2.	ESTABLISHMENTS DATABASE MAINTENANCE SUB-SYSTEM (EDMS)	50
3.5.3.	PRODUCTS DATABASE MAINTENANCE SUB- SYSTEM (PDMS)	52
3.5.4.	FOREIGN COUNTRIES DATABASE MAINTENANCE SUB-SYSTEM (FDMS)	56



3.5.5.	REPORTS AND QUERIES SUB-SYSTEM	58
4.	LIST OF 3RD PHASE REQUIREMENTS	71
5.	LIST OF 4TH PHASE REQUIREMENTS	84
6.	DISCUSSION	89

APPENDIX

	LIST OF THE PERSONNEL INTERVIEWED	90
--	---	----

* * * * *

D/190/4

PB/KM

**4. PREPARATION OF COMPUTER SYSTEM
SPECIFICATIONS**



4. PREPARATION OF COMPUTER SYSTEM SPECIFICATIONS

In order to meet the information requirements listed in conceptual design of Industrial Information System, computer resources required were analyzed and computer system specifications were prepared.

HARDWARE RESOURCES

- Central Processing Unit
- Disk drive requirement
- Magnetic tape drive requirement
- Terminals
- Dot matrix printers
- Laser printers
- Plotters
- Line printer
- Modems
- Personal computers

SOFTWARE RESOURCES

- Operating System Software
- Storage management
- Performance monitor
- Scheduling monitor
- Hardware diagnostic monitor
- Network design aids
- Program library control monitor
- File management software
- Communication software
- Utilities



Programming languages
Application generator
Editor
Screen management software
Database management software
Data dictionary
Database analysis and design tools
Statistical analysis package.

SITE PREPARATION

Space requirements
Power requirements
Lighting
Flooring
Ceiling
Cabling
Air-conditioning
Safety



THE CONSULTING CENTER
FOR FINANCE AND INVESTMENT
Dr. Abdulaziz M. Dukheil

REPORT ON

COMPUTER SYSTEMS SPECIFICATIONS

PRESENTED TO

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

PREPARED BY

THE CONSULTING CENTER FOR FINANCE AND INVESTMENT

D. QA'DA 1409

JUNE 1989



TABLE OF CONTENTS

COMPUTER SYSTEMS SPECIFICATIONS REPORT

	<u>P A G E</u>
1. INTRODUCTION.....	1
2. AN OVERVIEW OF APPLICATION SYSTEMS.....	3
2.1 INDUSTRIAL INFORMATION SYSTEM.....	3
2.1.1 MAIN DATABASES.....	4
2.1.2 SUBSYSTEMS OF INDUSTRIAL INFORMATION SYSTEM.....	6
2.2 OTHER APPLICATION SYSTEMS.....	7
2.2.1 SYSTEMS FOR DEPUTY MINISTRY OF FINANCE AND ADMINISTRATION.....	7
2.2.2 SYSTEMS FOR DEPUTY MINISTRY OF ELECTRICAL AFFAIRS.....	7
2.2.3 MAINTENANCE CONTROL SYSTEM FOR ENGINEERING AND PROJECTS DEPARTMENT.....	8
2.2.4 SYSTEMS FOR GENERAL USAGE.....	8
3. GENERAL COMPUTER SYSTEM REQUIREMENTS.....	10
3.1 RELIABILITY.....	10
3.2 MODULARITY.....	11
3.3 USER FRIENDLINESS.....	11
3.4 EXPANDABILITY.....	11
3.5 STANDARDIZATION.....	11
3.6 PERFORMANCE.....	12
3.7 BILINGUAL CAPABILITIES.....	12
3.8 DOCUMENTATION.....	12
3.9 LOCAL HARDWARE/SOFTWARE SUPPORT.....	12
4. HARDWARE SPECIFICATIONS.....	13
4.1 CENTRAL PROCESSING UNIT.....	13
4.2 PERIPHERAL REQUIREMENTS.....	14
4.2.1 DISK DRIVE REQUIREMENT.....	14
4.2.2 MAGNETIC TAPE DRIVE REQUIREMENT.....	18
4.2.3 TERMINALS.....	19
4.2.4 DOT MATRIX PRINTERS.....	19
4.2.5 LASER PRINTERS.....	20



4.2.6	PLOTTERS.....	21
4.2.7	LINE PRINTERS.....	22
4.2.8	MODEMS.....	22
4.3	PERSONAL COMPUTERS.....	23
5.	SOFTWARE SPECIFICATIONS.....	24
5.1	MACHINE ORIENTED SOFTWARE.....	24
5.1.1	OPERATING SYSTEM SOFTWARE.....	24
5.1.2	STORAGE MANAGEMENT.....	25
5.1.3	PERFORMANCE MONITOR.....	26
5.1.4	OPERATIONS SUPPORT/SCHEDULING MONITOR....	26
5.1.5	HARDWARE DIAGNOSTIC MONITOR.....	27
5.1.6	NETWORK DESIGN AIDS.....	27
5.1.7	PROGRAM LIBRARY CONTROL MONITOR.....	27
5.1.8	FILE MANAGEMENT SOFTWARE.....	28
5.1.9	COMMUNICATION SOFTWARE.....	28
5.2	UTILITIES.....	29
5.2.1	SORT/MERGE.....	29
5.2.2	DISK/TAPE LIBRARIAN.....	29
5.2.3	FILE BACKUP UTILITY.....	29
5.2.4	DUMP/LISTER.....	29
5.2.5	DATA COMPARISON UTILITY.....	30
5.2.6	DATA MANIPULATION UTILITY.....	30
5.3	PROGRAMMER/USER ORIENTED SOFTWARE TOOLS..	30
5.3.1	PROGRAMMING LANGUAGES.....	30
5.3.2	TESTING AIDS.....	30
5.3.3	APPLICATION GENERATOR.....	31
5.3.4	FULL SCREEN PROGRAM EDITOR.....	32
5.3.5	SCREEN MANAGEMENT SOFTWARE.....	32
5.4	DATA MANAGEMENT SOFTWARE TOOLS.....	33
5.4.1	DATABASE MANAGEMENT SYSTEM.....	33
5.4.2	DATA DICTIONERY.....	34
5.4.3	DATABASE ANALYSIS AND DESIGN AIDS.....	35
5.5	DECISION SUPPORT SOFTWARE TOOLS.....	35
5.5.1	STATISTICAL ANALYSIS SYSTEM.....	35
5.5.2	SPREADSHEET ANALYSIS SYSTEM.....	36
5.6	NETWORKING FACILITY.....	36



6.	SITE PREPARATION.....	38
6.1	SPACE REQUIREMENT.....	38
6.2	POWER REQUIREMENT.....	38
6.3	LIGHT.....	39
6.4	FLOORING.....	39
6.5	CEILING.....	39
6.6	CABLING.....	39
6.7	AIR CONDITIONING.....	40
6.8	SAFETY.....	40
6.9	OFFICE AND SPECIAL EQUIPMENT.....	41
7.	HARDWARE INSTALLATION AND ACCEPTANCE TESTING.....	47
7.1	INSTALLATION AND TESTING OF HARDWARE.....	47
7.2	INSTALLATION AND TESTING OF SOFTWARE.....	47
7.3	ACCEPTANCE TESTING OF HARDWARE AND SOFTWARE.....	47
8.	TRAINING REQUIREMENTS.....	48
8.1	TRAINING FOR OPERATORS.....	48
8.2	TRAINING FOR PROGRAMMERS/SYSTEMS ANALYSTS.....	48
8.3	TRAINING FOR SYSTEM PROGRAMMER.....	49
9.	MAINTENANCE OF HARDWARE AND SOFTWARE.....	50
9.1	AVAILABILITY OF SPARE PARTS.....	50
9.2	AVAILABILITY OF HARDWARE SYSTEM SUPPORT..	50
9.3	AVAILABILITY OF SOFTWARE SUPPORT.....	51
9.4	COMPUTER SUPPLIES/CONSUMABLES.....	52
10.	CONCLUSION.....	54

**5. PREPARATION OF BID DOCUMENT FOR
PURCHASE OF COMPUTER SYSTEMS**



**5. PREPARATION OF BID DOCUMENT FOR
PURCHASE OF COMPUTER SYSTEMS**

Request for proposal (bid document) was prepared and sent to number of recognized vendors. The bid document consisted of Technical Specifications and various other forms and annexures which vendors were expected to fill up. Draft contract was also prepared for agreement with vendors.

**INVITATION FOR BID PROPOSALS FOR PURCHASE
OF COMPUTER SYSTEM UNDER UNIDO PROJECT
DP / SAU / 86 / 004 IN
THE MINISTRY OF INDUSTRY AND ELECTRICITY**

ISSUED BY

**UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
(UNIDO) & THE UNITED NATIONS DEVELOPMENT PROGRAMME
(UNDP) IN ASSOCIATION WITH THE MINISTRY OF INDUSTRY
AND ELECTRICITY (MIE)**

PREPARED BY

**UNIDO AND MIE WITH THE ASSISTANCE OF
THE CONSULTING CENTER FOR FINANCE AND INVESTMENT (CCFI)**

**RIYADH
SAUDI ARABIA**

**D. QA'DA 1409
JULY 1989**

TABLE OF CONTENTS

INVITATION FOR BIDS

TECHNICAL SPECIFICATIONS

ANNEXURES

DRAFT CONTRACT AND RELATED DOCUMENTS

**6. EVALUATION OF PROPOSALS RECEIVED
FROM THE VENDORS**



**6. EVALUATION OF PROPOSALS RECEIVED
FROM THE VENDORS**

All proposals received from the vendors were critically evaluated by the committee. CCFI had prepared evaluation criteria and weighting system for evaluating the proposal. CCFI was also part of the committee. CCFI provided technical assistance to committee members.

The evaluation committee submitted a report on "Evaluation of bid proposals for purchase of Computer System".

**7. ORGANIZATION STRUCTURING OF
COMPUTER DEPARTMENT**



7. ORGANIZATION STRUCTURING OF COMPUTER DEPARTMENT

CCFI studied organization structuring requirements of the Computer Department of the Ministry and made following recommendations.

- a) Computer Department should report to Asst. Deputy Minister for Industrial Affairs.
- b) Computer Department will be headed by a Director - Computer Department to whom Manager - Application Systems Section and Manager - Computer Systems Section will report.
- c) Manager - Application Systems Section will direct the work of systems analysts, application programmers, assistant application programmers and data entry operators.
- d) Manager - Computer Systems Section will direct the work of system programmers and Computer operators.
- e) Following number of personnel will be required to manage the computer department efficiently.

o Director - Computer Department	1
o Manager - Application Systems Section	1
o Manager - Computer Systems Section	1
o System Analysts	2
o Application Programmers	4
o Asst. Application Programmers	2
o System Programmer	1
o Computer Operators	2
o Data Entry Operators	2
o Typist/Secretary	1
o Office boy	1

- f) Job descriptions were prepared for each of the different jobs in Computer Department.



ORGANIZATIONAL STRUCTURE OF COMPUTER DEPARTMENT

PRESENTED TO

UNITED NATIONS INDUSTRIAL
DEVELOPMENT ORGANIZATION

PREPARED BY

THE CONSULTING CENTER FOR FINANCE AND INVESTMENT

SAFAR 1410

SEPTEMBER 1989



TABLE OF CONTENTS

	PAGE
PREAMBLE	
1. INTRODUCTION.....	1
2. ORGANIZATIONAL STATUS OF COMPUTER DEPARTMENT...	3
3. ORGANIZATIONAL STRUCTURE OF THE COMPUTER DEPARTMENT.....	5
3.1 FUNCTIONS OF THE COMPUTER DEPARTMENT.....	5
3.2 ORGANIZATIONAL SETUP.....	6
3.3 TOTAL NUMBER OF PERSONAL REQUIRED IN COMPUTER DEPARTMENT.....	8
3.4 JOB DESCRIPTIONS.....	9
4. RELATIONSHIP OF COMPUTER DEPARTMENT WITH USERS.	49

**8. SUPERVISION AND ACCEPTANCE OF
COMPUTER SYSTEM INSTALLATION**



8. SUPERVISION AND ACCEPTANCE OF COMPUTER SYSTEM INSTALLATION

Computer System installation was supervised by CCFI in order to ensure that all hardware and software components are delivered in acceptable condition and are functioning as per the specifications agreed upon in the agreement between UNIDO and ARDICO.

After the installation of computer hardware and software, following acceptance procedures were carried out.

Physical and technical verification of hardware
and software items

Hardware tests

Software tests

System connectivity tests

Integrated system test

Assessment of training.

List of all items delivered was prepared. The missing items were notified for UNIDO to follow it up with M/s. ARDICO.



REPORT ON
ACCEPTANCE OF SITE PREPARATION WORK

SUBMITTED TO
UNITED NATIONS DEVELOPMENT
ORGANIZATION

PREPARED BY
THE CONSULTING CENTER FOR FINANCE AND INVESTMENT

SHABAN, 1410

MARCH, 1990



CONTENTS

1. INTRODUCTION
2. PROGRESS OF SITE PREPARATION WORK
3. OUR OBSERVATION
4. CONCLUSION



REPORT ON
SUPERVISION AND ACCEPTANCE OF
COMPUTER SYSTEM INSTALLATION

PRESENTED TO
UNITED NATIONS INDUSTRIAL DEVELOPMENT
ORGANIZATION

PREPARED BY
THE CONSULTING CENTER FOR FINANCE AND INVESTMENT

R. THANI, 1411

OCTOBER, 1990



TABLE OF CONTENTS

PREAMBLE

1. INTRODUCTION.....	1
2. SUPERVISION OF COMPUTER SYSTEM INSTALLATION.....	2
3. ACCEPTANCE TEST PROCEDURES.....	3
4. CONCLUSIONS.....	16

APPENDIX - 1

4. LIST OF ITEMS NOT YET DELIVERED BY M/S ARDICO.....	20
--	----

APPENDIX - 2

5. LIST OF ITEMS DELIVERED AND INSPECTED BY CONSULTANTS.....	21
---	----

9. ACCEPTANCE TEST REPORT



9. ACCEPTANCE TEST REPORT

An acceptance tests were carried out and results of those tests were presented in a "Acceptance Test Report".



ACCEPTANCE TEST REPORT

PRESENTED TO

UNITED NATIONS INDUSTRIAL DEVELOPMENT
ORGANIZATION

PREPARED BY

THE CONSULTING CENTER FOR FINANCE AND INVESTMENT

R. AWAL, 1411

OCTOBER, 1990



TABLE OF CONTENTS

PREAMBLE

1. INTRODUCTION.....	1
2. ACCEPTANCE TEST PROCEDURES.....	2
3. CONCLUSIONS.....	15

APPENDIX - 1

4. LIST OF ITEMS NOT YET DELIVERED BY M/S ARDICO.....	19
--	----

APPENDIX - 2

5. LIST OF ITEMS DELIVERED AND INSPECTED BY CONSULTATS.....	20
--	----