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Maintenance Manual

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Backstop. Off: Ms. Nensner

Industrial Statistics Databases

UNIDO, IPC/SIN

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1. INTRODUCTION

The Industrial Statistics databases consist of INDSTAT3 - 3-digit ISIC statistics, INDSTAT4 - 4-digit ISIC statistics and IDSB - Industrial Demand-Supply statistics.

- The Industrial Statistics databases have been developed using MS Visual Basic 3.0 for user interface, program code, data import, storing and export.
- Data export in ASCII and CSV formats
- A DDE export link to Excel
- Browser
- User documentation and technical documentation

The Windows version is developed by Patrick Servais from Hendyplan, Belgium. The contact person in UNIDO is Paula Nenonen IPC/SIN.

2. SYSTEM ENVIRONMENT

The INDSTAT databases are running on an IBM compatible PC and in an MS Windows environment (MS Windows 3.1 or later).

A 386 processor based PC is enough but to reach a good level of performance a 486 with at least 8 MB of RAM is necessary. The hard disk requirements depend on the database to be installed. INDSTAT3 requires about 9 MB, INDSTAT4 about 5 MB and IDSB about 4 MB of the user's hard disk space for installation.

2.1. SYSTEM COMPONENTS

2.1.1. Mainframe procedures, programs and data structures

Files are to be prepared on the mainframe with the data in accordance to the structure required by industrial statistics databases. The files are downloaded to the PC using standard EXTRA emulation package features. The downloaded txt-files are to be exported to dat-files for the further use in Visual Basic applications.

2.1.1.1 Downloading data from the mainframe

• INDSTAT3

Statistical data:

Job UQD.JOHN.PLI(RUNPC01) on the mainframe has to be run to produce file UQD.JOHN.INDSTAT.DB.TABALL. This file is to be downloaded to the PC into taball.txt file.

Structure of taball.txt file:

Columns	Field
1-2	Table code
3-5	Country code
6-7	Year
8-9	Table definition

29 (one for each Isic code) occurrences of the following data group starting at position 10

Combination letter	2
Source	1
Date	4
Value	7
Exponent	1

Country data:

File UQD.DB.INDSTAT3.CNTRIES is to be downloaded to the PC into country3.txt file.

ISIC combinations:

File UQD.JOHN.INDSTAT.DB.COMB is to be downloaded to the PC into comb.txt file.

Exchange rates:

File UQD.JOHN.INDSTAT.DB.EXCH is to be downloaded to the PC into exchr.txt file.

Following txt files can be taken from the old setup (in case of no changes):

Isicdsc3.txt and tabledef.txt

• INDSTAT4

Statistical data:

Job UQD.JOHN.PLI(RUNPC12) on the mainframe has to be ran to produce file UQD.JOHN.INDSTAT.DBFD.TABALL. This file is to be downloaded to the PC into taball.txt file.

Structure of taball.txt file

Columns	Field
1-2	Table code
3-5	Country code
6-7	Year
8-9	Table definition

81 (one for each 4-digit Isic code) occurrences of the following data group starting at position 10

Combination letter	2
Source	1
Date	4
Value	7
Exponent	1

Country data:

File UQD.DB.INDSTAT4.CNTRIES is to be downloaded to the PC into country4.txt file.

ISIC combinations:

File UQD.JOHN.INDSTAT.DB.COMB is to be downloaded to the PC into isiccmb.txt file.

Exchange rates:

File UQD.JOHN.INDSTAT.DB.EXCH is to be downloaded to the PC into exchr.txt file.

Following txt files can be taken from the old setup (in case of no changes):

Isicdsc4.txt and tabledef.txt

• IDSB

Statistical data:

Jobs UQD.STATJCL.CNTL(RUNQMXC1) and (RUNQMXC2) on the mainframe have to be ran to produce file UQD.QMXC.DB.FOR.PC.RELOAD.REVnn, where nn=current year. This file is to be downloaded to the PC into taball.txt file.

Structure of taball.txt file:

Columns	Field
1-3	Country code
4-5	Year
6-9	Isic
10-14	Combination Isic (where applicable)
15-23	Domestic output
24-32	Imports from world
33-41	Exports from world
42-50	Apparent consumption
51-59	Imports from industrialized countries
60-68	Imports from developing countries
69-77	Exports to industrialized countries
78-86	Exports to developing countries

Country data:

File UQD.DB.IDSB.CNTRIES is to be downloaded to the PC into country5.txt file.

Following txt files can be taken from the old setup (in case of no changes):

Isic.txt and tabledef.txt

2.1.1.2 Data Import to Visual Basic

- INDSTAT3: Importing of txt files to Visual Basic dat files

Import Data File			
Working Directory :	J:\IPC_SIN\GROUP-ANENONENP\INSTALL\INI		Save DB
Application Title :	Industrial Statistics Database 1998 3-digit ISIC		Cancel
Number of Digit :	3	Database name :	INDSTAT3.IN3
Country File Name :	country3.txt	to	country3.dat
Branches File Name :	isicdsc3.txt	to	isicdsc3.dat
Data File Name :	taball.txt	to	indstat3.dat
Table Def File Name :	tablede3.txt	to	tablede3.dat
Component File Name :	comb.txt	to	isiccmb3.dat
Exchange File Name :	exchr.txt	to	exchgr3.dat
Years from :	63	to	96

Remark: If the dat files already exist, delete them before file import, existing files will be appended, not overwritten.

- INDSTAT4: Importing of txt files to Visual Basic dat files

Import Data File					
Working Directory :	J:\IPC_SIN\GROUP\WENONENP\INSTALL\INI			Save DB	
Application Title :	Industrial Statistics Database 1998 4-digit ISIC			Cancel	
Number of Digit :	4	Database name :	INDSTAT4.IN4		
Country File Name :	country4.txt	to	country4.dat		
Branches File Name :	isicdsc4.txt	to	isicdsc4.dat	Delete	
Data File Name :	tableall.txt	to	indstat4.dat	Read	
Table Def File Name :	table4.txt	to	tablede4.dat	View	
Component File Name :	d4comb.txt	to	isiccmb4.dat		
Exchange File Name :	dbexr.txt	to	exchgr4.dat		
Years from :	77	to	96		

Remark: If the dat files already exist, delete them before file import, existing files will be appended, not overwritten.

- IDSB: Importing of txt files to Visual Basic dat files

Import Data File				X
Working Directory :	J:\IPC_SIN\GROUP\WENONENP\INSTALL\ID		Save DB	
Application Title :	Demand Supply Database PN test		Cancel	
Number of Digit :	5	Database name :	indstat5.dsb	
Country File Name :	country5.txt	to	countryq.dat	
Branches File Name :	isic.txt	to	isicdsc.dat	Delete
Data File Name :	taball.txt	to	taball.dat	Read
Table Def File Name :	tabledef.txt	to	tabledef.dat	View
Component File Name :		to		
Exchange File Name :		to		
Years from :	81	to	96	

If the dat files already exist, delete them before file import, existing files will be appended, not overwritten.

2.1.2. PC Procedures to create the databases and the setup diskettes

Files are to be prepared on the mainframe with the data in accordance to the structure required by industrial statistics databases. The files are downloaded to the PC using standard EXTRA emulation package features

2.1.2.1 PC files required to implement Industrial Statistics databases

- INDSTAT3

.txt files	Visual Basic .dat & .ini files	Compressed files
country3.txt	country3.dat	country3.da_
isicdsc3.txt	isicdsc3.dat	isicdsc3.da_
comb.txt	isiccmb3.dat	isiccmb3.da_
	isiccmb3.idx	isiccmb3.id_
taball.txt	indstat3.dat	data.10_ , data20_ & data.30_
	indstat3.idx	indstat3.id_
exchr.txt	exchr3.dat	exchr3.da_
	exchr3.idx	exchr3.id_
	indstat3.in3	indstt3.in_
tablede3.txt	tablede3.dat	tablede3.da_

- INDSTAT4

.txt files	Visual Basic .dat & .ini files	Compressed files
country4.txt	country4.dat	country4.da_
isicdsc4.txt	isicdsc4.dat	isicdsc4.da_
isiccmb.txt	isiccmb4.dat	isiccmb4.da_
	isiccmb4.idx	isiccmb4.id_
taball.txt	indstat4.dat	indstat4.da_
	indstat4.idx	indstat4.id_
exchr.txt	exchr4.dat	exchr4.da_
	exchr4.idx	exchr4.id_
	indstat4.in4	indstt4.in_
tablede4.txt	tablede4.dat	tablede4.da_

• IDSB

.txt files	Visual Basic .dat & .ini files	Compressed files
country.txt	countryq.dat	countryq.da_
country.txt		country.tx_
isic.txt	isicdsc.dat	isicdsc.da_
isic.txt		isic.tx_
taball.txt	taball.dat	data.10_ & data20_
	taball.idx	taball.id_
isicomb.txt		isicomb.tx_
	indstat5.dsb	idsb.ds

2.1.2.2 Creation of SETUP diskettes

Contents of the latest installation diskettes are located

for INDSTAT3: in UNIDO_MIS2:DATA\ipc_sin\group\nenonenp\install\indstat3

for INDSTAT4: in UNIDO_MIS2:DATA\ipc_sin\group\nenonenp\install\indstat4

for IDSB: in UNIDO_MIS2:DATA\ipc_sin\group\nenonenp\install\idsb

- Data file creation for INDSTAT3 Data file

1. PAK A /exe Data Taball.dat
2. SPLIT Data.exe 3 Data
3. COMPRESS Data.001 Data.10_
COMPRESS Data.002 Data.20_
COMPRESS Data.003 Data.30_

- Data file creation for INDSTAT4 Data file

1. PAK A /exe Data Taball.dat
2. COMPRESS Data Indstat4.da_

- Data file creation for IDSB Data file

1. PAK A /exe Data Taball.dat
2. SPLIT Data.exe 2 Data
3. COMPRESS Data.001 Data.10_
COMPRESS Data.002 Data.20_

3. MS VISUAL BASIC V. 3.0 FOR USER INTERFACE AND PROGRAM CODES

Microsoft Visual Basic version 3.0 (Professional edition) has been used for the user interface, program code, data import, storing and export. The data storing format is a binary format used by Visual Basic.

3.1. VISUAL BASIC SOURCE CODE MODULES

3.1.1. Source code modules for application

Source code modules to generate the application are located in UNIDO_MIS2:DATA\ipc_sin\group-\nenonenp\interface\database.

Project DATABASE.MAK consists of the following Visual Basic modules:

ABOUT.FRM	AVAIL.FRM
EXCEL.FRM	EXPORT.FRM
FORM1.FRM	FORM2.FRM
IMPORT.FRM	INTRO.FRM
ISIC.FRM	LIST.FRM
LIST1.FRM	LIST2.FRM
LOAD.FRM	MDI.FRM
NEW.FRM	OPEN.FRM
PRINT.FRM	RATE.FRM
SELECT.FRM	VIEW.FRM
DATACONS.TXT	ENGBASE.BAS
FORM.BAS	PRINTER.BAS
TEST.BAS	GRID.VBX
THREED.VBX	

3.1.2. Source code modules for setup

Source code modules to generate the setup are located in UNIDO_MIS2:DATA\ipc_sin\group-\nenonenp\interface\setup

Project SETUP.MAK consists of the following Visual Basic modules:

MESSAGE.FRM	PATH.FRM
SETUP1.FRM	STATUS.FRM
SETUP1.BAS	SETUP1.GLB
SETUPFN.BAS	

3.2. VISUAL BASIC FILE STRUCTURE

The file structure is the same for Indstat3, Indstat4 and IDSB. It is similar to an indexed sequential structure. Each file consists of a data and an index file. Those files are Visual Basic Binary files. The index file has the same number of records as the corresponding data file. Both index and data records have the same key, but the key can be in a different position in the index from the key in the data file. Data access through the index is faster than accessing the data directly.

3.3. DATABASE CONFIGURATION FILES

The configuration of each database (Indstat3, Indstat4 and IDSB) is stored in a configuration file. The structure of the configuration file is similar to a .INI file (a Windows configuration file). In each configuration file for the Industrial Statistics database there are three sections: Database, Startup and Importfile.

The database section specifies the type of the database. The startup section provides the information shown on the import screen and the range of the years of the values. The importfile section specifies the source txt files and the binary data files.

Example:

```
[Database]
Type=3 Digit (*.in3)
CreationTime=29/03/96 12:20

[Startup]
Title=Industrial Statistics ISIC3 1996
StartDate=60
EndDate=95

[ImportFile]
Type0=Countries
Import0=country3.txt
Destination0=country3.dat
Type1=Branches
Import1=isicdsc3.txt
Destination1=isicdsc3.dat
Type2=Values
Import2=db.txt
Destination2=indstat3.dat
Type3=TableDefinition
Import3=tabledef.txt
Destination3=tablede3.dat
Type4=Component
Import4=isiccmb3.txt
Destination4=isiccmb3.dat
Type5=Rate
Import5=dbexr.txt
Destination5=exchgr3.dat
```

Following three database types are used:

- 3 Digit (*.in3)
- 4 Digit (*.in4)
- Demand Supp (*.dsb)

4. INSTALLATION OF DATABASES

4.1. INSTALLATION CONFIGURATION FILE

- Setup1.ini

Installation .INI file is called Setup1.ini. There are two sections for the setup: Application section, which contains information to be displayed on the installation screen and Execution section, which contains a list of DOS commands that are to be executed by the setup program after the installation.

```
[Application]
AppName=Industrial Statistics Database
AppLongName= Industrial Statistics Database 4 Digit Isics
Appdir=c:\indstat4

[Execution]
file1=data.exe -o
file2=del data.exe
```

- Packing.lst

Packing.lst file is required for the installation. The files to be installed are indicated there.

```
# packing list for Industrial Statistics Database

# tokens are:
#   source filename
#   dest. filename
#   filesize (may not be exact only an evaluation for the percentage of installation)
#   uncompressed size in K
#   destination directory (u=user w=windows)
#       user directory is typically c:\database
#       windows directory is typically c:\windows\system
#   source version (if appropriate) (if none, don't even try to check)

# warning: the parser for this file is not robust: make any changes with care

!disk1

ddeml.dl_   ddeml.dll       39424 w
grid.vb_   grid.vbx        45136 w
threed.vb_ threed.vbx      64544 w
indstat3.10_ indstat3.001  904351 u

!disk2

database.ex_ database.exe  201484 u
country3.da_ country3.dat   22816 u
isicdsc3.da_ isicdsc3.dat   1885 u
indstat3.20_ indstat3.002  904351 u
indstat3.id_ indstat3.idx   6312 u
indstat.hl_  indstat.hlp   42471 u
tablede3.da_ tablede3.dat    520 u
isiccmb3.da_ isiccmb3.dat  59436 u
isiccmb3.id_ isiccmb3.idx   1404 u
exchgr3.da_ exchgr3.dat   64176 u
exchgr3.id_ exchgr3.idx   32088 u
merge.ex_   merge.exe     21253 u
indstat3.in_ indstat3.in3   458 u

!disk3

indstat3.30_ indstat3.003  904351 u
```

4.2. INSTALLATION DISKETTES

Each database has a set of installation diskettes. The installation template is the same but the number of diskettes can vary.

INDSTAT3	3 diskettes
INDSTAT4	2 diskette
IDSB	2 diskettes

To install the database interface, insert the first diskette into the drive. Then type from the Program Manger/Run 'a:\setup'. The setup program will be started. Setup program will ask the directory where you want to install the database. If the directory doesn't exist the setup program creates it. When all required files have been copied and expanded to the hard disk the setup program will create an icon in the Windows environment.

5. MAINTENANCE PROCEDURES AND TOOLS

5.1. MAINTENANCE OF VISUAL BASIC CODE

Standard methods and properties of Visual Basic 3.0 Professional Edition are enough to maintain the Visual Basic application. GRID.VBX and GRAPH.VBX are to be included in the application. The application icon has been taken from the Visual Basic icon library, the UN bitmap on the "Introduction" form has been taken from the ClipArt library of MS Office Professional Edition v. 4.3.

5.2. MAINTENANCE OF THE HELP FILE

The Windows help files have been produced using ForeHelp software from ForeFront Inc. In order to add/edit/delete topics and to allow context-sensitive help mapping ForeHelp is to be used. The mapping numbers assigned for help topics are the to be used in Visual Basic to map the application items (windows, menu items...) to particular help topics.