CDS/ISIS

Information Storage
and
Retrieval System

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CDS/ISIS - *What it is?*

- CDS/ISIS is a generalized Information **Storage** and **Retrieval** System

- It is intended to be used for **structured non-numerical** databases containing mainly texts

- It is specialized in handling **variable-length** information

- It may manage stand-alone as well as **local network** database systems

CDS/ISIS - *What it is?*

- Unlike Dbase or MS-Access, CDS/ISIS **is not** a relational database system, although it provides some relational facilities

- CDS/ISIS **deals with** questions like: "*which research projects deal with basic education in India*?"

- It may be expanded by advanced users (programmers) for adding new services and tools

- A wide variety of solutions for Internet publishing of data are already available

## CDS/ISIS - *What is a database?*

- The term "**database**" denotes a collection of structured information

- A database contains data elements called "**records**"

- Each record in the database has the **same structure**

- Some units of information in a record may be **absent**, some others may **occur more than once** (a book may have more than one author or may not have an ISBN)

- Data units in a record are called "**fields**"

- Fields may contain independent data elements called "**subfields**".

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CDS/ISIS - *What is a database?*

Example of database structure
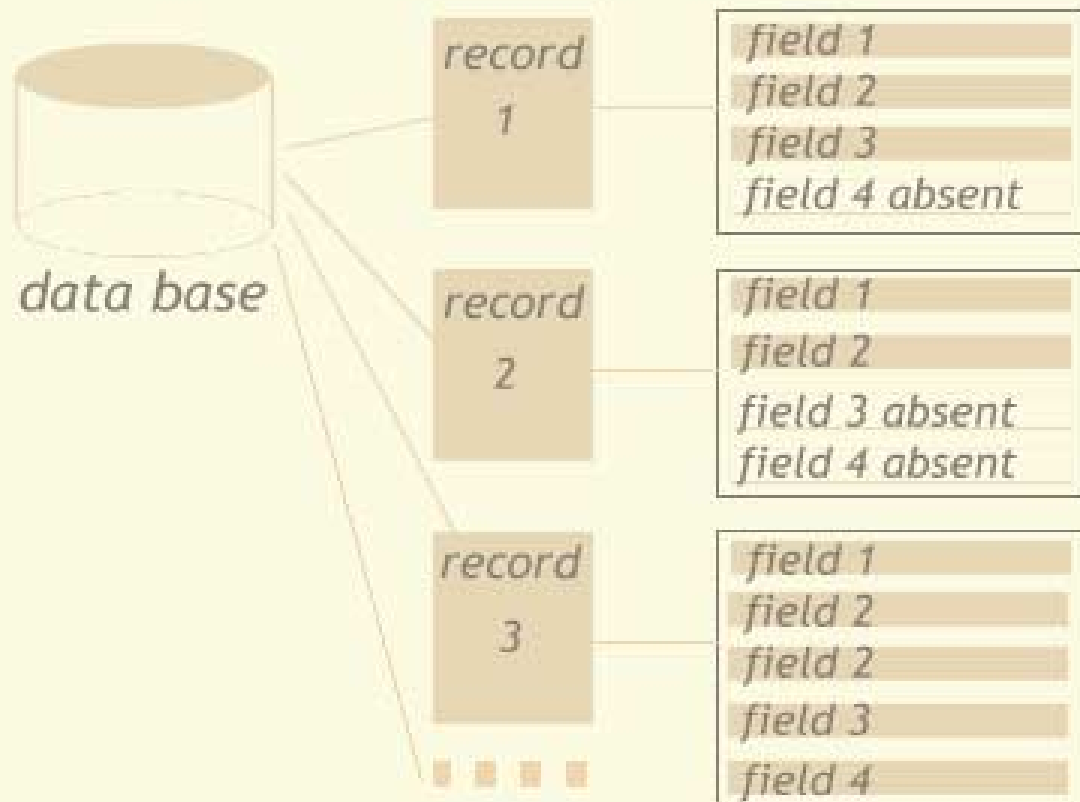
CDS/ISIS - *Basic features*

- CDS/ISIS allows the user to design the record structure of each database his own

- You can decide:
    - what kind of fields to include
    - which fields will be sortable and searchable
    - in what shapes your want to display or print the contents of a record

- You can keep many different databases each in a different structure in your computer, for many different applications

CDS/ISIS - *Basic features*

Once the database has been created, CDS/ISIS allows to:

- Create new records, to put new information in the archive

- Keep the stored information up-to-date by adding new data elements, modifying existing ones and deleting unnecessary information

- Analyze the content of the database to extract searchable information following your own instruction

- Search and retrieve subsets of the stored information

- Display or print the results the way you want
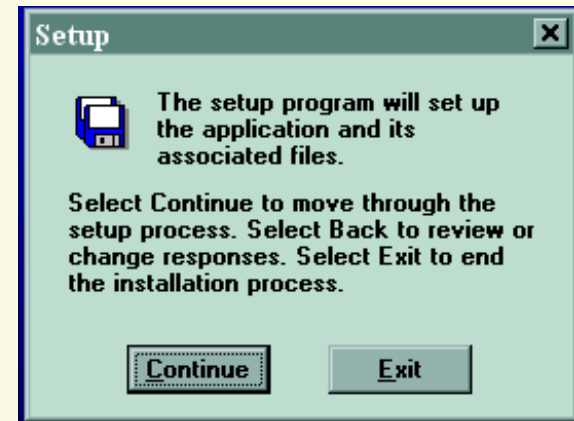
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CDS/ISIS - *Basic knowledge*

- Records are stored in a file named "**Master File**" (MST)

- Each record in the database can be referred to by its unique number, called "**Master File Number**" (MFN)

- The MFN is **automatically assigned** by the system when a the record is created

- Fields within a record are identified by a code number called **TAG**

- You may access a record not only by its number but by its **content**

- For this purpose, you may maintain a **dictionary of searchable terms**, also called "*Inverted File*"

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CDS/ISIS - *Installation*

To install CDS/ISIS for Windows:

- Insert the **disk 1** in your drive
- From Windows 95 Start menu, run:
    a:\setup.exe
- The following screen will appear:
- Choose "**Continue**" to start the installation procedure
- **Follow the instructions** on the screen: usually you may just click "Ok" to each installation question

Setup

The setup program will set up the application and its associated files.

Select Continue to move through the setup process. Select Back to review or change responses. Select Exit to end the installation process.
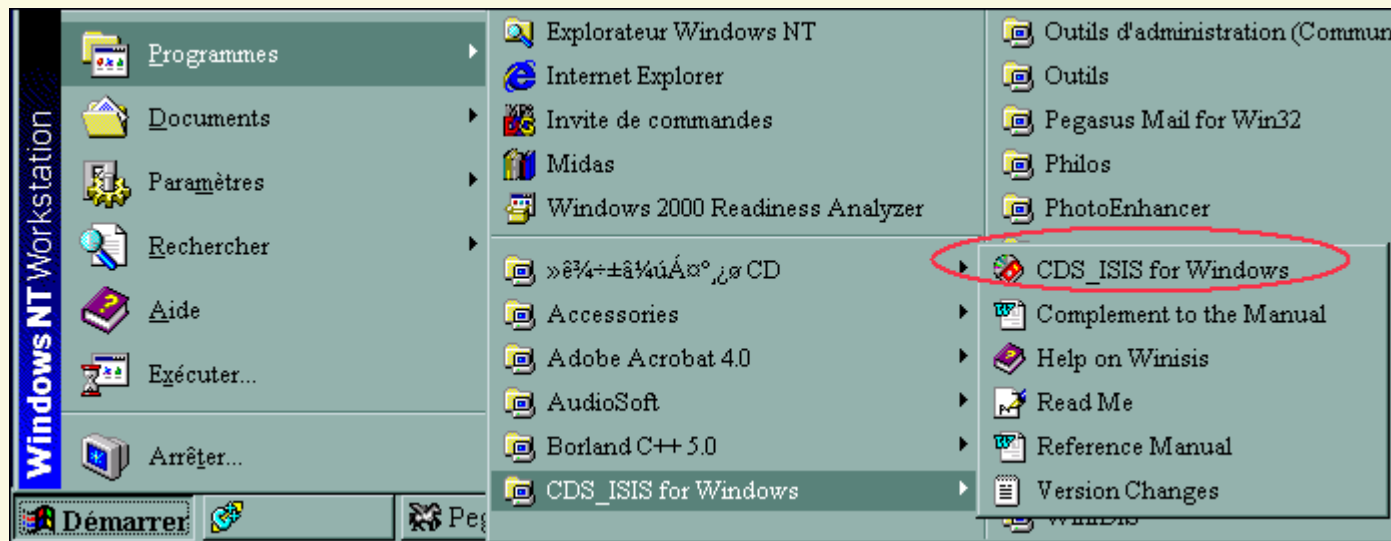
Continue   Exit

CDS/ISIS - *Running CDS/ISIS*

To launch the CDS/ISIS for Windows (Winisis):
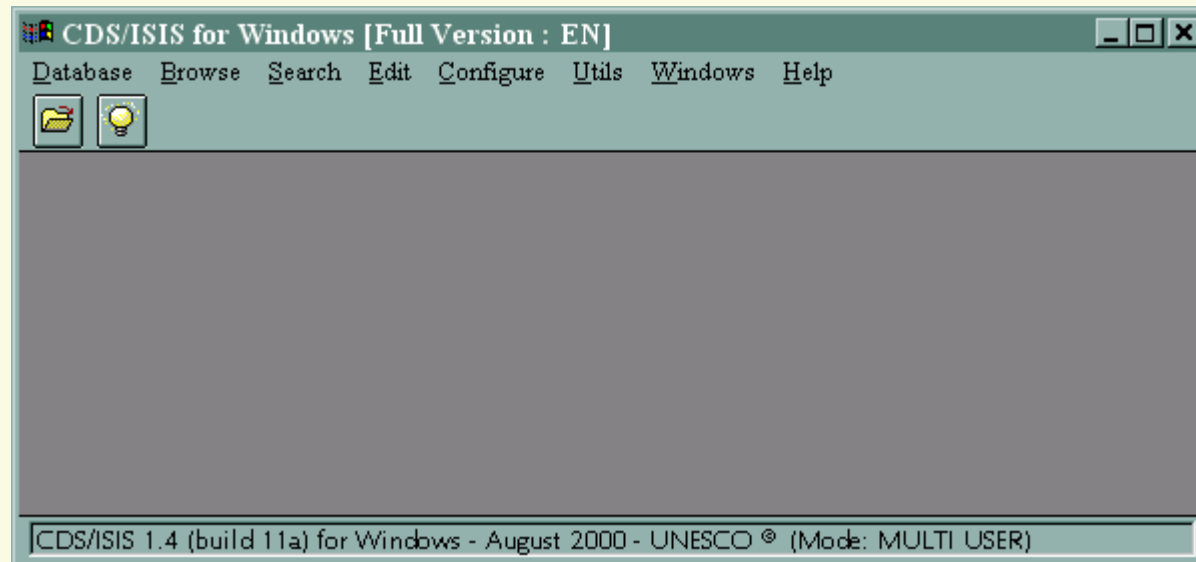
- Locate the program shortcut.
  In Windows95 it is in the Start
  menu, folder Programs...

- Click the item to run Winisis
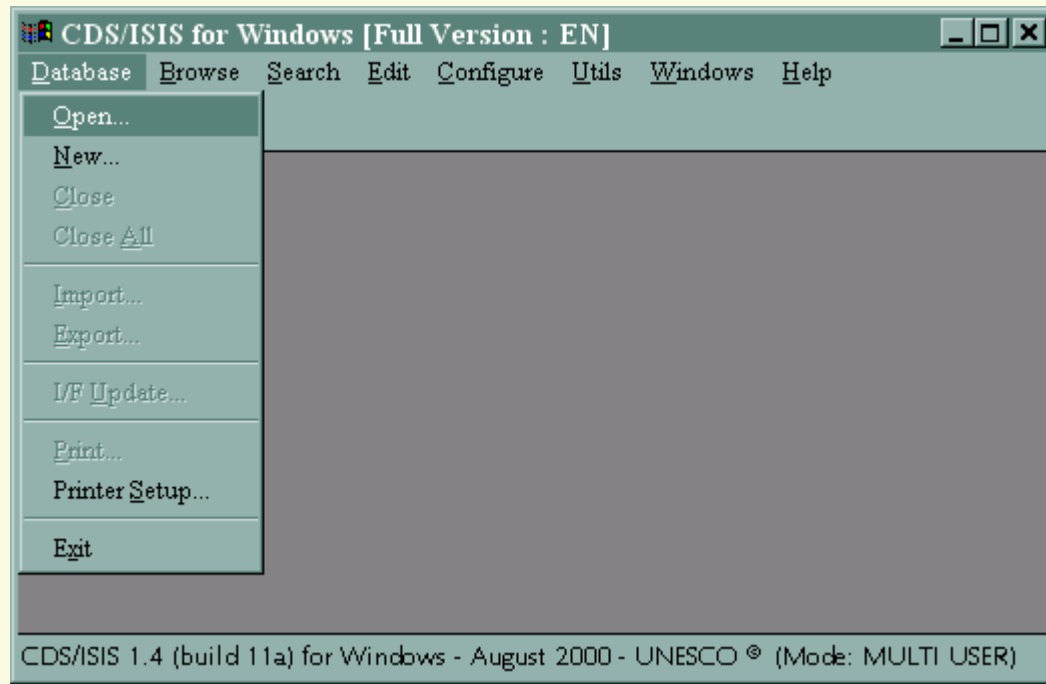
The following screen will appear:

In case of problems, please read the "readme.wri" file.

CDS/ISIS - *Running CDS/ISIS*

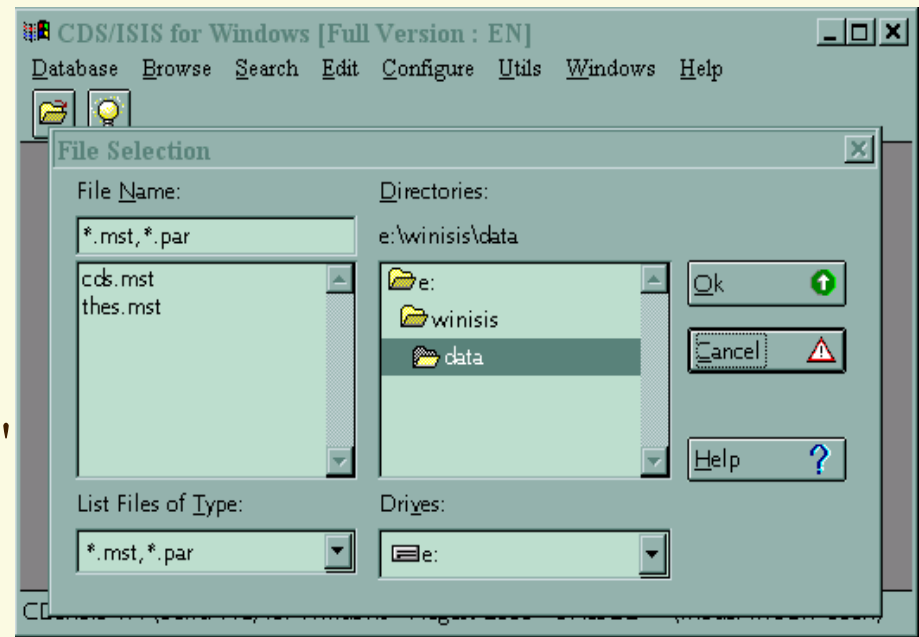- Use **menus and buttons** to access the CDS/ISIS services:

CDS/ISIS - *Running CDS/ISIS*

- In order **to get familiar** with the system, two databases are provided as examples. The most important is CDS.
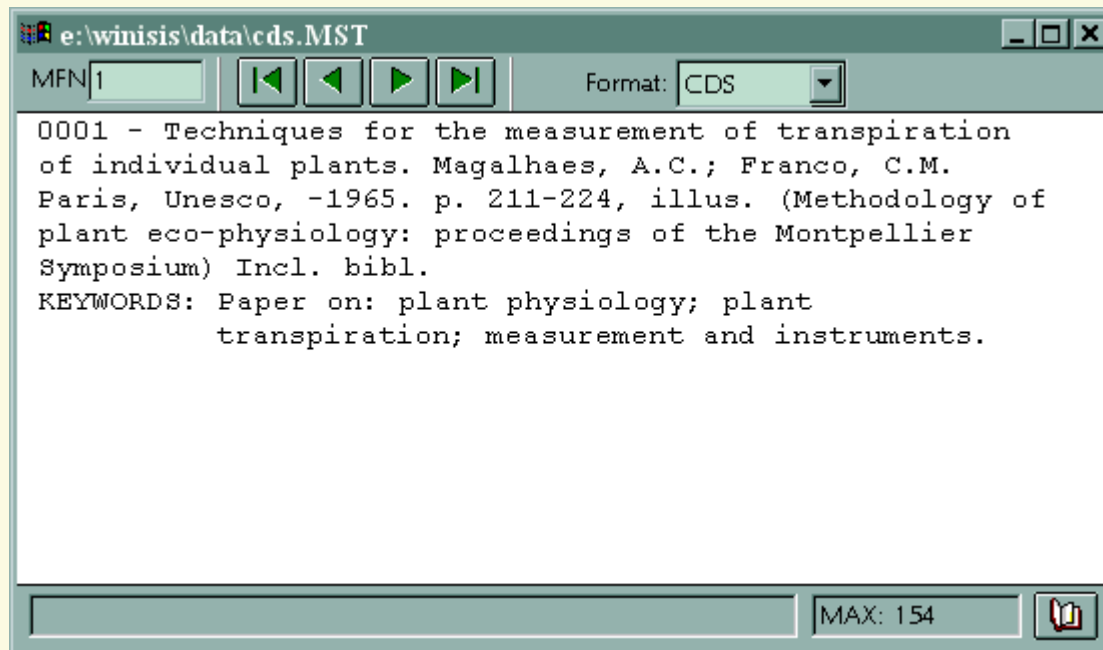
- To open an existing database select the menu option **File - Open…** Double-click on "**CDS**" from the database list

CDS/ISIS - *Running CDS/ISIS*

- The database "CDS" is now open and you may start using the CDS/ISIS services:

The CDS/ISIS interface is **multi-lingual**. UNESCO's version comes with menus and messages in:

- English
- French
- Spanish (2 versions)
- Italian

Users may create **their own language versions** by translating system messages to another language. This procedure is quite simple and is explained in the **Reference Manual**. Among other available languages are:

- Portuguese
- Dutch
- Polish
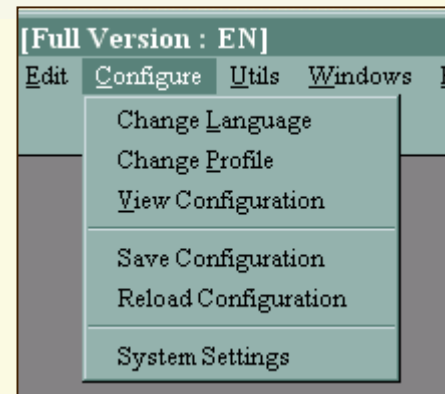- Vietnamese
- German
- Slovak

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CDS/ISIS - *Running CDS/ISIS*

- At any time you may **configure CDS/ISIS for Windows** using the "Configure - System Settings" menu:
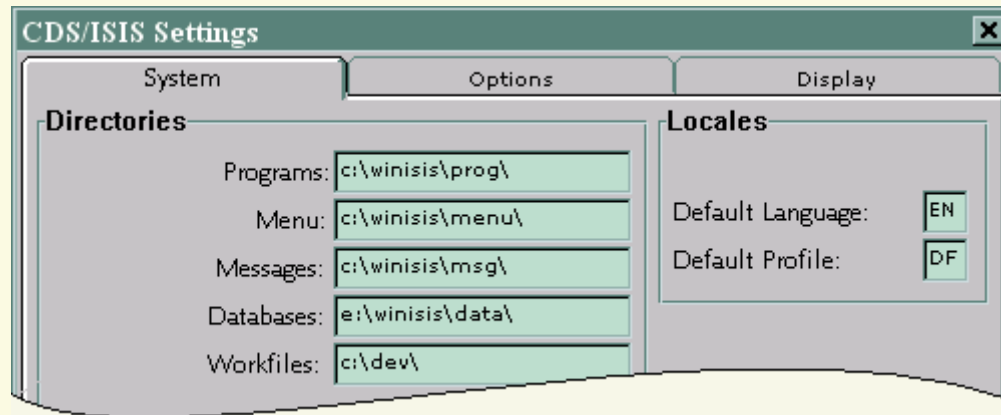
- Use the menu "Configure" to change the current interface language and profile at any time
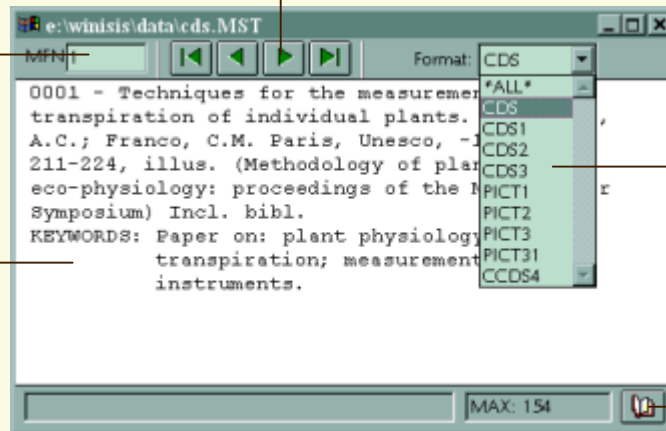

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CDS/ISIS - *Basic Information retrieval*

To browse the content of an existing database:

- **Open** the database file (ex. CDS.MST)
- Use the arrows to **move within** the records sequentially, just as the pages of a book
- You may select **different views** by choosing a different display format

Type here the record number you wish to access

Move within records sequentially

The content of the record displayed using the current format

Select the display format

Open the dictionary of searchable terms

```
e:\winisis\data\cds.MST                                    _□×
MFN|1     |◄| ◄ | ► |►|    Format: CDS              ▼
                                         *ALL*
0001 - Techniques for the measuremen|CDS        |,
transpiration of individual plants. |CDS1
A.C.; Franco, C.M. Paris, Unesco, -1|CDS2
211-224, illus. (Methodology of plar|CDS3
eco-physiology: proceedings of the N|PICT1      |r
Symposium) Incl. bibl.               |PICT2
KEYWORDS: Paper on: plant physiology|PICT3
             transpiration; measurement|PICT31
             instruments.              |CCDS4

                                  MAX: 154    |□|
```

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CDS/ISIS - *Basic Information retrieval*

To search an existing database:

- **Open** the corresponding file (ex. CDS.MST)

- Select option "**Search - Expert Search**"

- Despite its name, the expert search" could be easier than the "guided search"

- The following search window will come up:
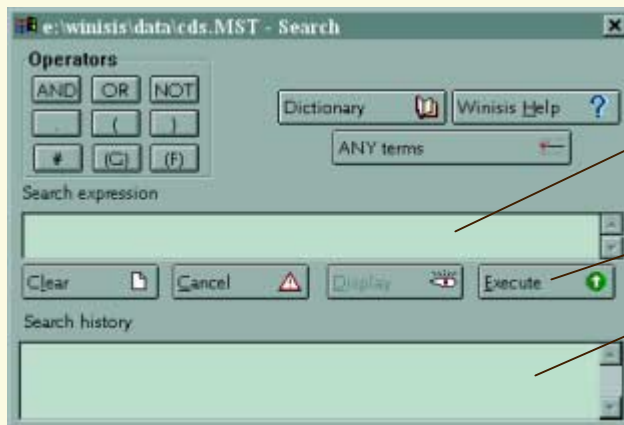
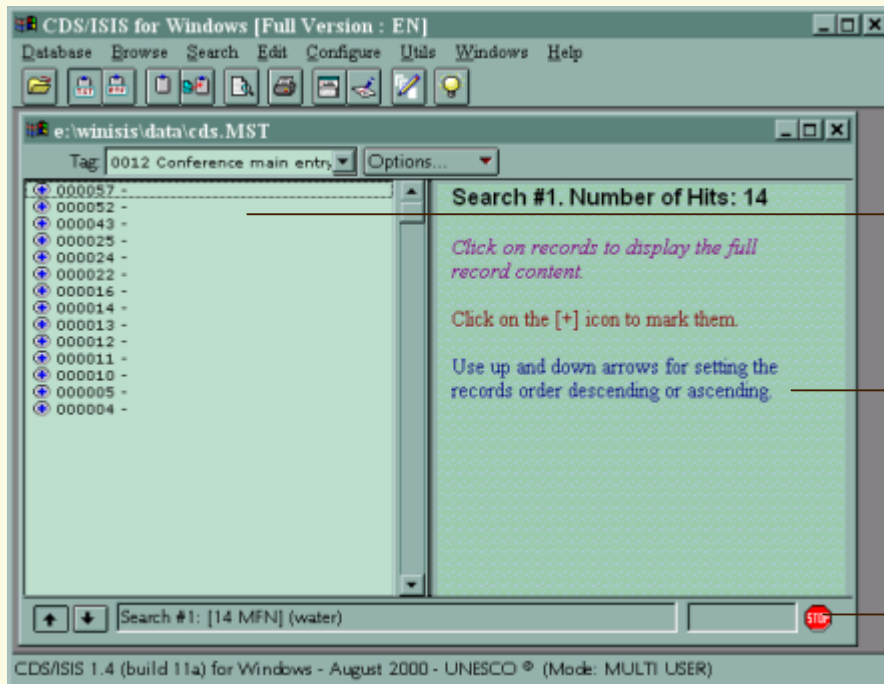Type here a search expression (for example: **water**)

Click "Execute"

Search results will appear here Double click on the result to access the information

Congratulations, you made your first search with CDS/ISIS!

• Your screen should now look like:

List of results. Each number corresponds to a MFN (Master File Number)

This screen explains how to watch the results. As soon as you **click one of the MFN** on the left side, this panel will display the content of the selected record
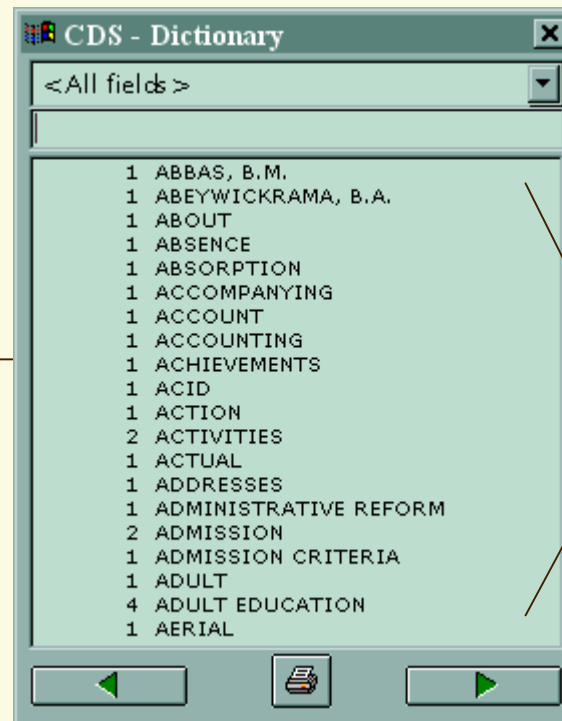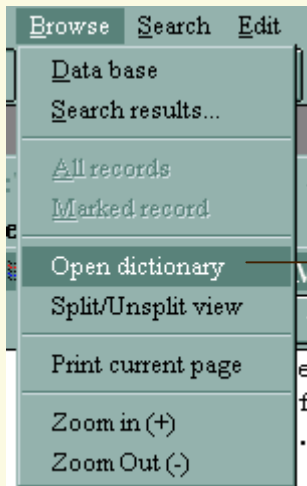
Click STOP to come back to the normal view

• To make a new search select option "Search" again

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CDS/ISIS - *Basic Information retrieval*

In order to get an idea of what the content of database CDS is, you may display its **dictionary of searchable terms**. This will help you to find out **what can we ask** to CDS/ISIS and **how**:

Browse   Search   Edit

Data base
Search results...

All records
Marked record

Open dictionary
Split/Unsplit view

Print current page

Zoom in (+)
Zoom Out (-)

CDS - Dictionary

< All fields >

1	ABBAS, B.M.
1	ABEYWICKRAMA, B.A.
1	ABOUT
1	ABSENCE
1	ABSORPTION
1	ACCOMPANYING
1	ACCOUNT
1	ACCOUNTING
1	ACHIEVEMENTS
1	ACID
1	ACTION
2	ACTIVITIES
1	ACTUAL
1	ADDRESSES
1	ADMINISTRATIVE REFORM
2	ADMISSION
1	ADMISSION CRITERIA
1	ADULT
4	ADULT EDUCATION
1	AERIAL

All those terms comes from the records. It is possible to search for them separately or in combination

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## CDS/ISIS - *Basic Information retrieval*

- The dictionary of searchable terms, also called Inverted File, is built following the directives given by the **database creator**

- Those directives instruct CDS/ISIS on how to extract the search terms from a record. The directives are collected in the **Field Selection Table** (*FST*)

data base   FST   dictionary
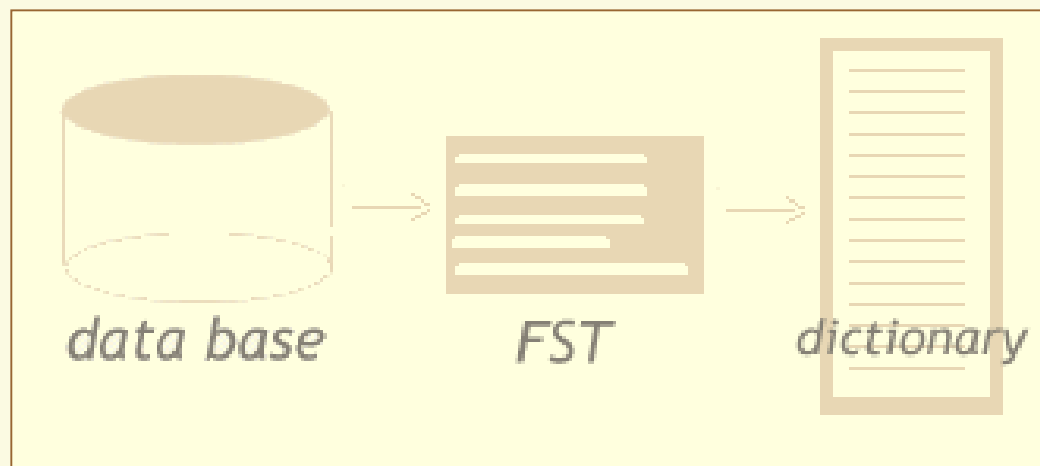
CDS/ISIS - *Basic Data Editing*

- You may **update** the information contained in a given record by using the CDS/ISIS Data Entry option

- Selecting this option will open the **Data Entry window** which allows to modify the content of every single field

Edit	Configure	Utils	Wind
Data entry			
Delete record			
Copy to Clipboard			
Clear Clipboard			
Field Definition Table			
Data Entry Worksheets			
Print Formats			
Field Selection Tables			

- This window also enables access to further options:
  - Creation of new records
  - Deletion of existing records
  - Add./Deletion of fields, new repetitions, etc...
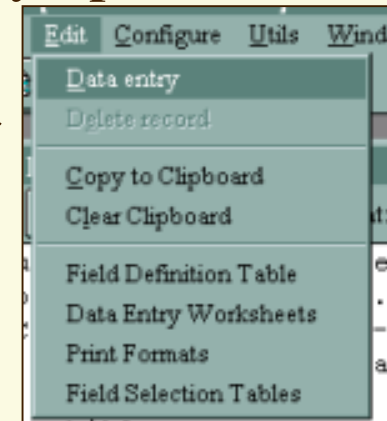
CDS/ISIS - *Basic Data Editing*

- When editing a record, the system will **automatically** check for some kind of errors, for example:

  - Attempt to insert invalid subfield elements
  - Attempt to repeat non-repeatable fields
  - Other validation restrictions foreseen by the database manager

- Each time the record is **stored** (saved) to the disk, the new content becomes available for browsing

- You must ensure that the **Inverted File** has been updated in order to be able to search for terms in the new record

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- Several **Data Entry worksheets** may be available for a given database, in order to insert different data elements.

- Each time the record is **stored** (saved) to the disk, the new content becomes available for browsing

- You must ensure that the **Inverted File** has been **updated** in order to be able to search for terms in the new record
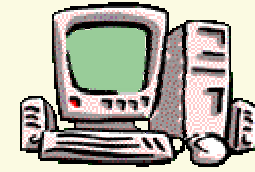
CDS/ISIS - *Functioning scheme*

- To resume, the following figure shows the role of the different components of a CDS/ISIS database
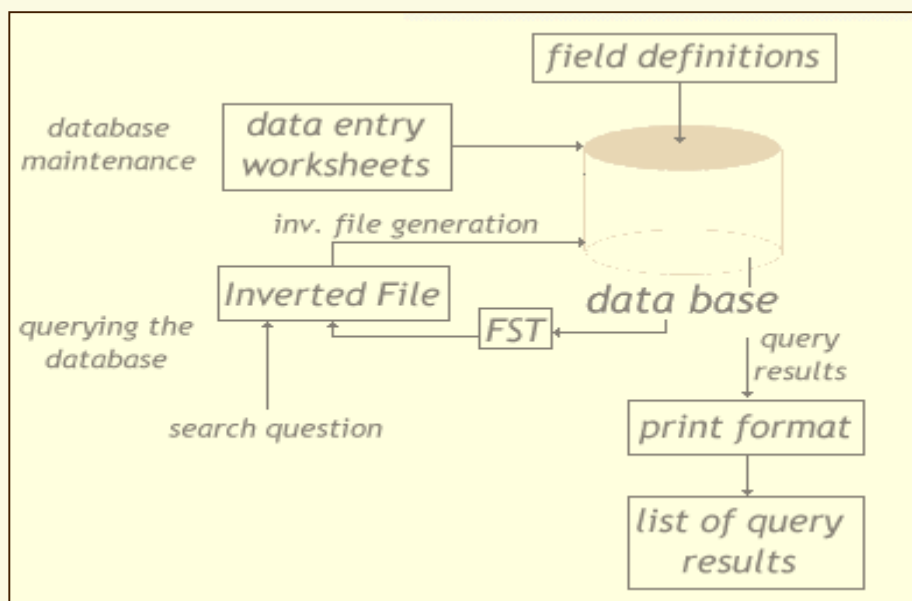
CDS/ISIS - *Beyond my own computer*

There are several ways to **share** information with others:

- Publish diskettes or **CD-Roms** containing the database(s)

- Share them in a **Local Area Network** (LAN)

- Share them in Remote Private Networks (through **TCP/IP**)

- Publish them to the **World Wide Web**

- Mix all the solutions above!!

CDS/ISIS - *Beyond my own computer*

CD-Roms publishing

- Winisis can be used as the **front end** to the user

- The formatting language allows building **nice-looking** presentations

- You may configure the environment to **block** the access to specific "dangerous" functionalities

- The interface is already **internationalized** and supports different languages

- Most applications do not need **real programming**

Local Area Network (LAN)

- Put your database in a shared **network drive**

- Use Winisis as a client: one copy to serve all **terminals**, different configuration for each one

- Search, update, maintain the database from your chair

- The **LAN type** does not matter: Windows, Novell...

- **Concurrent** entry access is supported

JAVAISIS: Private Networks through TCP/IP

- Physically **distant computers** work on the same database

- JAVAISIS is a **Client/Server** suite for managing remote databases in a TCP/IP (Internet) environment

- Search, **update**, maintain the database from your chair

- **Easy** to install, it comes with its own navigator

- Runs on Windows, Linux and **Macintosh** (client)

- JAVAISIS is a Winisis working with remote data

CDS/ISIS - *Beyond my own computer*

The World Wide Web

- It is more and more important to share data on the Internet: presence

- Different tools exists for Web-publishing CDS/ISIS databases. For example: WWWISIS by Bireme, Brazil

- It allows all kind of operation and perfectly integrates the concepts of CDS/ISIS for free or very low cost

- Runs on many different platforms: Windows, Linux, SUN, AIX...

CDS/ISIS - *Beyond my own computer*

The World Wide Web

- GENISIS (Ibiscus): to easy the use of WWWISIS

- Take a database, fill few questionnaire, press OK

- Your new CDS/ISIS enabled web page is ready to go!

- Need to change something? Go back and modify!

- Need to move to Linux: export your web application

CDS/ISIS - *Product family*

- The resume here are some of the products available in the software **family**:

  - CDS/ISIS for DOS

  - CDS/ISIS for Windows (all versions)

  - CDS/ISIS for UNIX (character mode)

  - JavaISIS, Client - Server Internet suite

  - UNESCO/BIREME ISIS_DLL, programming tool

  - BIREME WWWISIS / Ibiscus GENISIS

  - WinIDIS, the interface to **IDAMS**

CDS/ISIS - *Where to find more*

- Some of those products, tools, examples and most documentation can be found on UNESCO's FTP Server:

  ftp://ftp.unesco.org/pub/winisis

- Also, more language versions of CDS/ISIS for Windows can be found there.

CDS/ISIS - *Where to find more*

- For additional information, please consult UNESCO's official sites. The following includes **news** from the CDS/ISIS community and a wide list of users' dedicated web-sites:

  http://www.unesco.org/webworld/isis

- International and local **mailing lists** host discussions about CDS/ISIS problems and events every day

- The following site is dedicated to JavaISIS:

  http://web.tiscalinet.it/javaisis

CDS/ISIS - *Conclusion*

Thank you, ladies and gentlemen's, for your kind attention.