



Statistical Office
of the
European Communities

CUB.X
for
MS-Windows 3.1

Software
for Manipulating
Arrays of Statistics

Version 1

Mini Reference Guide – CD-ROM version

CUB.X Presentation

All the data used in the examples are totally fictitious. Some of the screens are designed solely to enhance explanation or document composition and so may be different from reality.

The CUB.X program for Windows is a tool for exploiting statistical multi-dimensional tables.

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A full Cub.X manual is available on request.




Conventions


-  ➤ means : select using the mouse.
-  ➤ means : select using the keys.
-  ➤ means : use MS-Windows features

REMEMBER ! Under the MS-Windows environment

-  ➤  click to maximize a window
-  ➤  click to reduce a window (put the window in background)
-  ➤  click to reduce or restore a window

To exit any program running under MS-Windows :

-  ➤ ALT+F4 -or-
-  ➤ Double-click the System Menu ) in the upper left corner of the active window.

-  ➤ means : use the arrow keys (to scroll, etc.).

(if you are using the numeric keypad, make sure NUM LOCK is off before using it).

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Installation procedure (CD-ROM)

Before the installation: if you have an older version of CUB.X, delete the file **eurostat.ini** located in **windows** directory, the old version of CUB.X and the New Cronos directory.

See also **thereadme.txt** file in the CD-ROM root.

If MS-Windows is not already running, type **Win** at the DOS prompt.



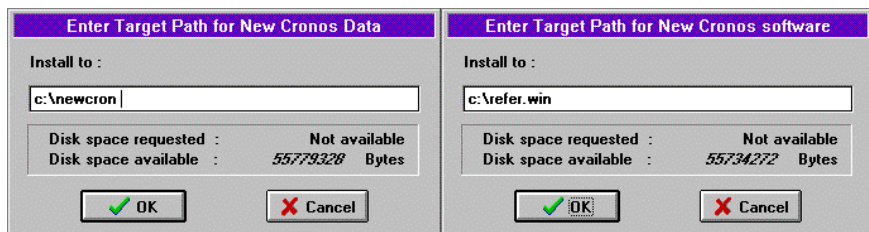
Insert the New Cronos CD-ROM in your CD-ROM drive.

Setup.exe This procedure covers the basics for setting up Cub.X

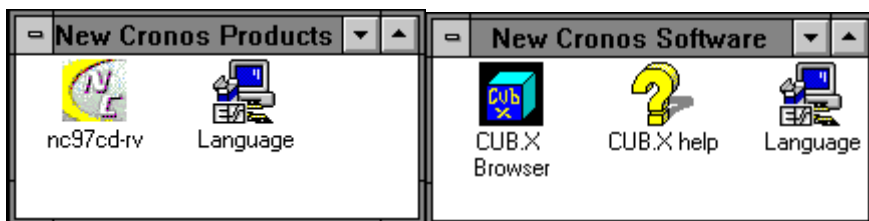
➤ From the File menu, choose Run (ALT, F, R) or *Start Run* in Windows95.

Type : **d:\setup** (should your CD-ROM drive name be **d:**). When the program asks you for target directories :

1. for the 'New Cronos Data', click OK to accept **c:\newcron** directory by default (or type any other directory),
2. for the 'New Cronos Software', click OK to accept **c:\refer.win** directory by default (or type any other directory).



The installation procedure creates the 'New Cronos Software' and the 'New Cronos Products' program groups.



The icons are the following :



nc97cd-rv

for the New Cronos Products



CUB.X
Browser

for the program.

Working with Cub.X

If Windows is not already running, at the system prompt, type **win** and then press Enter.

In the Program Manager, double-click the 'New Cronos Software' group icon or the group icon that contains Cub.X



New Cronos
Software

Starting CUB.X

To launch Cub.X



- Double-click the CUB.X Browse icon

-or-

- Select the CUB.X Browse icon using the arrow keys, then press Enter



CUB.X
Browser

Exit from CUB.X

To quit Cub.X



- From the File menu, choose Exit

➤ (ALT, F, X)


-or-

- Use the "exit" feature of MS-Windows

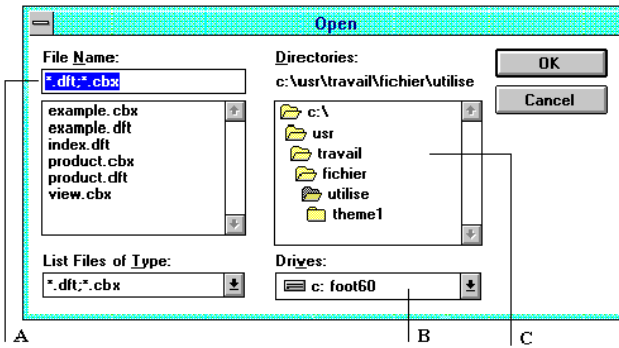
The datafile

Opening a data file

To open an existing data file
File extensions :
filename.dft and
filename.cbx

 ➤ From the File menu, choose Open ➤ (ALT, F, O)

The following dialog box appears



A : type or select the file you want to open.

B : select a new drive, if necessary.

C : select a new directory, if necessary.




Choose the OK button.

See also "Many views, one datafile" (Working with views) on page 18-19.

Closing a file


To open another file without
quitting Cub.X

 ➤ From the File menu, choose Close. ➤ (ALT, F, C)

Then : open a data file as above.

Information on the datafile

To open an additional
information file
File extension : filename.hlp

 ➤ From the "Information and Help" menu, ➤ (ALT, I, I)
choose Information on the table

Warning ! Data files may not have this additional information.

Note : when you open a data file, an "Information and Help" window may open automatically, and hide a part of the .DFT window. It gives you additional information on the table, the origin of values, dimensions. Should your table has an additional information file.

The index file

An index is a file that organizes your data and allows you quicker access to them. If your tables have a lot of data, it is necessary to use an index with the table.

If you don't really know how to work with an index,

- ⇒ **do not** delete the first index you receive, and
- ⇒ **do not** activate the command confirm index in the Options menu.

CUB.X will automatically read the index when you open the data file.

If you decide not to use the index for a particular reason, you can activate an option that will ask you if you want to use the index, each time you open a table.

Confirming an index

To use an index
File extension : filename.IDX



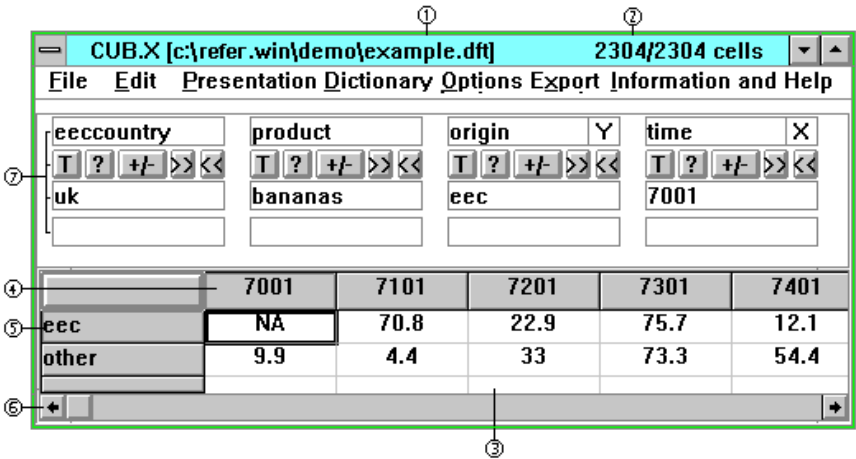
Before opening the file *.DFT, click the Options menu and look at Confirm index

If the command is checked (✓), the *index confirmation* is active. So, *the index is NOT automatically used*: **you will have to confirm its use** A confirmation message will appear.

If the command is not checked, it means that the index confirmation is not active. So, *the index will be used without notice*

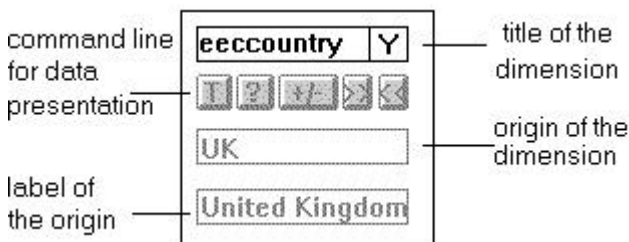
Consultation of a data file : screen description

Cub.X is organised like a page of a spreadsheet ; it allows data to be viewed, selected and exported. The window shows only a part of the page that may contain more rows and columns than can be displayed on the screen.



- ① Complete name of the current file
- ② Number of cells
- ③ Data presentation
- ④ X axis, one of the dimensions
- ⑤ Y axis, one of the dimensions
- ⑥ Horizontal scroll bar
- ⑦ Dimension blocks

- ① **Current file name**
Drive, directories and file names are between 2 square brackets.
- ② **Number of cells**
The first number (2304/...) is the number of selected cells with **+/-** ; the second (.../2304) is the number of all the cells defined in the file.
- ③ **Data presentation**
The intersection of the X and Y axes, and also the selected positions in each other dimension block (set of positions - see page 9).
- ④ **X axis**
Horizontal axis. A value of the X axis defines a column.
- ⑤ **Y axis**
Vertical axis. A value of the Y axis defines a row.
- ⑥ **Horizontal (vertical) scroll bar**
Appears when the window size doesn't allow the whole table to be displayed.
- ⑦ **Dimension blocks**



Axis (X or Y)

Indicates that the dimension is used as X or Y axis.



Labels

"Removes" all the dimension labels. To display all the labels, use the command Options/Labels.



Information positions

Gives you more information about the dimension and its positions.



Select / Unselect

Allows you to select or unselect positions of the dimension. Useful for exporting a subset of the data.



Go forward

Go to the next position(s) of the dimension.



Go back

Go to the previous position(s) of the dimension.

eecountry

Title of the dimension

Name of the dimension. This name corresponds to the associated dictionary (eecountry.dic, for instance).

UK

Origin of the dimension

This button allows you to select directly any position you want to see. By clicking this button, the list of all the positions appears. Click on one of them to select it.

United Kingdom

Label of the origin

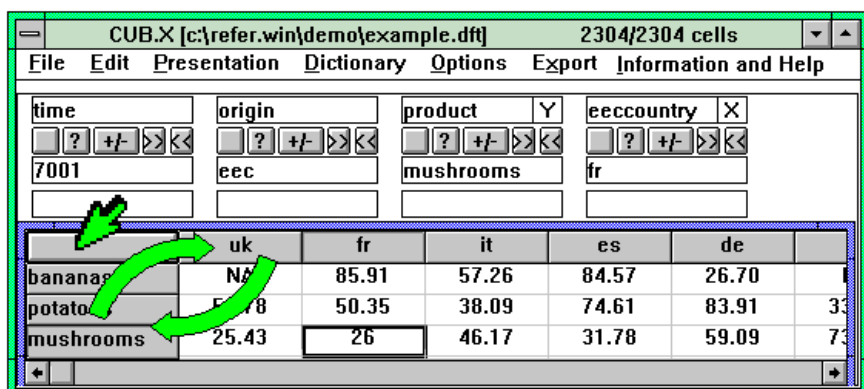
When CUB.X finds the associated dictionary of a data file, it puts the labels in this box. If you don't see the entire label, click on it : the label will appear in a label box.

Displaying data

Rotation of axes

To invert the two main axes X & Y

It is useful to be able to rotate axes to see better some set of values. In the following figure, the arrow shows you where you have to click to swap the two axes.



The screenshot shows a software window titled "CUB.X [c:\refer.win\demo\example.dft]" with 2304/2304 cells. The menu bar includes File, Edit, Presentation, Dictionary, Options, Export, Information and Help. Below the menu are four dimension controls: "time" (value 7001), "origin" (value eec), "product" (value mushrooms), and "ecccountruy" (value fr). Each control has a question mark, a plus/minus sign, and left/right arrow buttons. Below these is a data table with columns for "uk", "fr", "it", "es", and "de". The rows are "bananas", "potato", and "mushrooms". A green arrow points from the "ecccountruy" control to the "uk" column header, and another green arrow points from the "uk" column header to the "fr" column header, illustrating the rotation of the X-axis.

	uk	fr	it	es	de	
bananas	NA	85.91	57.26	84.57	26.70	
potato	78	50.35	38.09	74.61	83.91	33
mushrooms	25.43	26	46.17	31.78	59.09	73

Changing axes

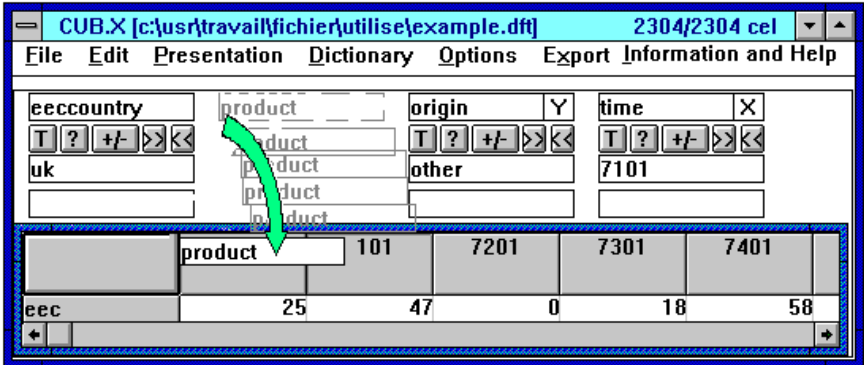
To replace one dimension by another as the X or Y axis to see easily all the corresponding values to each position

This command allows you to have only one file with one multi-dimensional table, but many views of the data.

Three ways are provided to do this very important manipulation :

- drag and drop a dimension title toward an axis.
- drag and drop a dimension block title towards another one.
- use keyboard shortcuts to change quickly the place of each dimension.

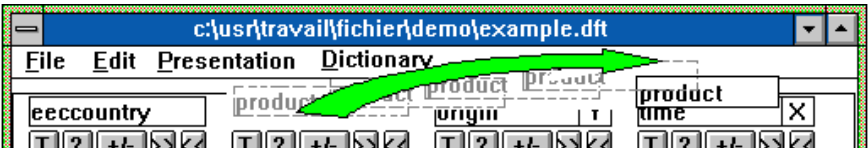
First method :  **Drag and drop a dimension title toward an axis**



Move cursor to the title of the dimension block. Click and hold down the left button, drag towards an axis, and drop (by releasing the mouse button).

Note : this option is applies only to dimensions other than X and Y.

Second method :  **Drag and drop a dimension block title toward another one**

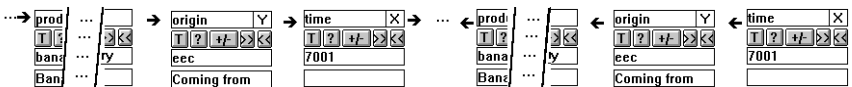


In this example, product becomes the new X axis, and time will take the previous place of product. The order of the other dimensions is reorganised.

Third method :  **Shortcutsto change quickly each dimension place**

➤ **CTRL + R** to shift the dimension blocks to the right

➤ **CTRL + L** to shift the dimension blocks to the left.



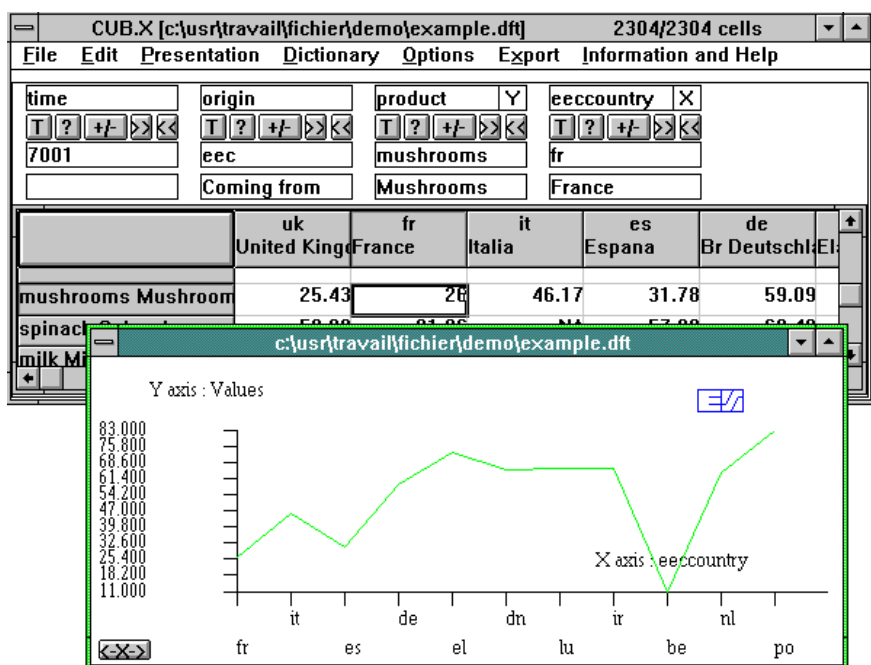
Charting with CUB.X

To create a chart relative to the displayed data

➤ Press **CTRL + G**

First, you have to decide what you want to present on the chart.

- The X axis of the table will be the X axis of the chart, in the example below the countries.
- The selected position of the Y dimension will define the Y axis. In the example below, the position mushroom will be the dimension product.
- The current line of the table (the line where the cursor is) will be represented on the chart.



Note : Cub.X is not designed for charting : this is a rough and ready facility for providing a graphical view of the selected data. Making more complex charts, data manipulation and calculation, is left to your preferred software. (See 'Export manipulation" page 23).



Click this button to reverse the axes order on the chart sheet

Changing the alignment To change the alignment of all the cells. Only for the values, not for the labels.

➤ From the Options menu, choose Justify. ➤ (ALT, O, J)

You can chose between 3 options : Left , Center or Right Justify. The alignment you choose will be kept for the next session of CUB.X whichever file you open.

Displaying a grid To choose the aspect of the table

➤ From the Options menu, choose Table. ➤ (ALT, O, T)

You can chose between 3 options. The option that you choose will be kept for the next session of CUB.X whichever file you open.

Grid			Panel			None		
	bananas	potatoes		bananas	potatoes		bananas	potatoes
uk United	NA	56.78	uk United	NA	56.78	uk United	NA	56.78
fr France	85.91	50.35	fr France	85.91	50.35	fr France	85.91	50.35
it Italia	57.26	38.09	it Italia	57.26	38.09	it Italia	57.26	38.09
es Espana	84.57	74.61	es Espana	84.57	74.61	es Espana	84.57	74.61

Displaying all the labels Display the labels associated with each position of all the dimensions

To activate all the labels for all the dimension :

➤ From the Options menu check the command Labels ➤ (ALT, O, L)

Table with labels activated :

	eec	other
	Coming from Economic European Communities	Coming from outside the EEC
uk United Kingdom	NA	9.96
es Espana	84.57	49.13
de Br Deutschland	26.70	26.57
el Elada	NA	44.48
dn Danmark	3.87	81.26
lu Luxembourg	61.04	71.91
ir Ireland	77.17	81.74

Table without labels activated :

	eec	other
uk	NA	9.96
es	84.57	49.13
de	26.70	26.57
el	NA	44.48
dn	3.87	81.26
lu	61.04	71.91
ir	77.17	81.74

To activate or remove the labels of one dimension

- Click to remove all the dimension labels.
The becomes .
- Click to display again all the dimension labels.
The becomes .

You can selectively activate the labels of only some of the dimensions.

If you want few labels, it is better to remove the check mark of the menu Options/ Labels , whereas if you want a lot of labels, it is better to check this option.

To see the entire label When labels are too large to be read

- Point to the label on the dimension block, click and hold down the left button of the mouse.
- or-
- Point to the label in the table, click and hold down the left button of the mouse.
- Release the left button and the label disappears.

Example :

origin	Y
<input checked="" type="checkbox"/> ? +/- > <	
eec	
Coming from	

-Or-

	7001	7101
eec Coming	25.43	47.04
other Comin	30.91	50.39

↓

Coming from outside the EEC							750
other Comin	30.91	50.39	2.30	72.96	0.48	31.7	

Decimals

To choose the number of decimals

- From the Options menu, choose Decimals
- (ALT, O, D)

Columns/Rows To size all columns and/or rows

- From the Options menu, choose Columns/Rows ➤ (ALT, O, C)
- Use the mouse to select a size in one of the dialog boxes

OR ➤ Use the mouse to size **directly one row and/or one column** :

	bananas	potatoes	mushroom
	Bananas	Potatoes	Mushrooms
uk United Kingdom	NA	56	25
fr France	85	50	26
it Italia	57	38	46

Restore native order Used to reset the original presentation after making changes in the display of the table

- From the Presentation menu, choose Restore native order ➤ (ALT, P, N)

Reset ranges To cancel everything done with

- From the Presentation menu, choose Reset ranges ➤ (ALT, P, E)

Refresh screen To rebuild a disturbed display

- From the Presentation menu, choose Refresh screen ➤ (ALT, P, R)


Change of language

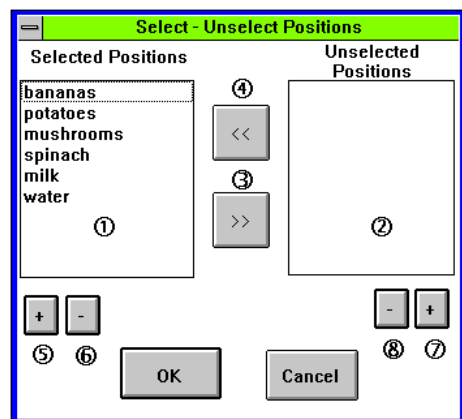
- From the Options menu, choose Language ➤ (ALT, O, L, , or)
- Select one Language Press Enter

Refer also to "Dictionary manipulation".

Selecting or unselecting position(s) of a dimension


To select the positions you want to be shown on the screen


Click on the  button of the corresponding dimension block. This dialog box appears :





This box displays all the selected positions of the dimension (the positions to be shown on the screen).


This box displays all the unselected positions of the dimension (the positions not to be seen on the screen).


 The button allows you to move the highlighted positions from box to box : these positions will be **unselected and not shown**.

 The button allows you to move the highlighted positions from box to box : these positions will be **(re)selected and shown**.

 By clicking one of the buttons - or +, a dialog box appears. In this dialog box, you can enter an expression, called a regular expression that allows you to activate positions (highlighted positions) to be selected in box , - or in box respectively -.

 By clicking one of the buttons - or +, a dialog box appears which allows you to deactivate some highlighted positions, from box - or from box respectively -. The mechanism of regular expressions is used (cancel some selections made in box , - or in box -).

 This button validates all your changes.

 Cancel any previous operations in this dialog box.



Notes :

- ⇒ These selection(s) do not imply that your values will be deleted from the table.
- ⇒ You will find a detailed explanation of regular expressions and their use in the Memo on page 28.

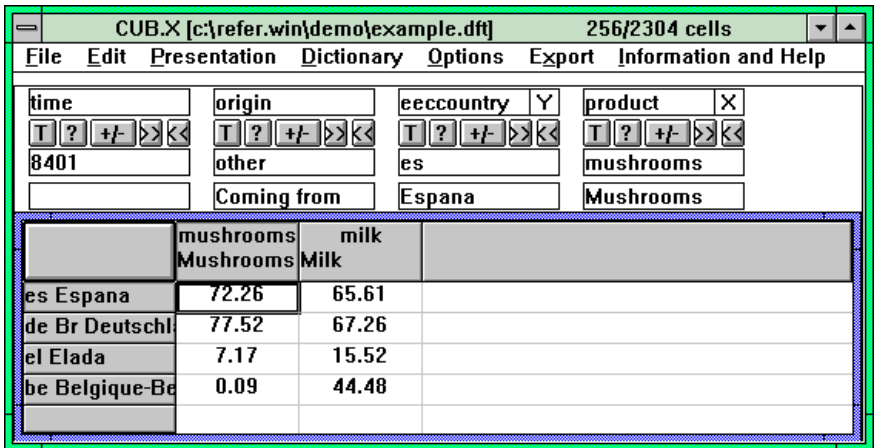
Example

Initially, **all** the dimensions values can be seen. Suppose you may want to see only some of the position.

To **unselect** some positions :


- 1 Click  in the dimension block to unselect some positions.
- 2 In the selected positions box , click all the products you don't want to see, to unselect them
- 3 Click  : the highlighted products are transferred automatically to the unselected positions box.
- 4 Click OK

The result is the same table with only the positions that interest you.



The screenshot shows a software window titled "CUB.X [c:\refer.win\demo\example.dft]" with 256/2304 cells. The window has a menu bar with "File", "Edit", "Presentation", "Dictionary", "Options", "Export", and "Information and Help". Below the menu bar are four dimension blocks: "time", "origin", "eecountry", and "product". Each block has a "T" button, a "?", a "+/-" button, and ">>" and "<<" buttons. The "time" block contains "8401". The "origin" block contains "other" and "Coming from". The "eecountry" block contains "es" and "Espana". The "product" block contains "mushrooms" and "Mushrooms". Below the dimension blocks is a table with the following data:

	mushrooms	milk	
	Mushrooms	Milk	
es Espana	72.26	65.61	
de Br Deutschl	77.52	67.26	
el Elada	7.17	15.52	
be Belgique-Be	0.09	44.48	

To re-select those positions, you just have to do the same thing in box and click  .

Many views, one datafile

Introduction

A view allows you to have a certain way of looking at your data, specifying a presentation and selection. It is similar to saving your file with another name but saving a view (.CBX) is much more interesting than saving a file (.DFT).

To open a view

File extension : filename .CBX



From the File menu, choose Open



(ALT, F, O)

Select the view that you want to open (a name followed by the extension .CBX). The view opens the corresponding data file with the data represented as you choose.

To save a view

To save or create a presentation
that you would like to work with
(to export, to read...)
File extension: filename .CBX

To store a view on your hard disk :



From the Presentation menu,
choose View.



(ALT, P, V, S)

Then choose the option Save a view



Warning ! Make sure that the file keeps the extension .CBX.

Working with views

You have two ways to work with an existing view of a file :

- ⇒ You open directly the view (.CBX), instead of opening the data file (.DFT).
- ⇒ You open the data file (.DFT), and then, when you need it, **load** the attached view.

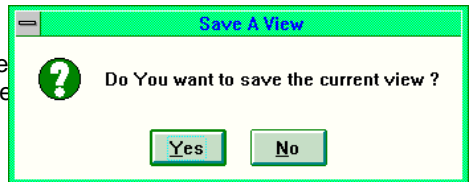
To load a view

To load an existing view attached to the opened .DFT datafile.
File extension : filename .CBX



- From the Presentation menu, choose View.
- Then choose the option Load a view.
- (ALT, P, V, L)

When you release the mouse button, CUB.X allows you to save current changes in a new view :



If you want to save it, follow the instructions of the paragraph "To save a view".

A dialog box appears, asking you to choose the view (.CBX) that you want to load in the file list box, for example, PRODUCT.CBX.

You are in the same data file, but with another "View".

You can load many views in a CUB.X session (one at a time).

Note : you can't load a view that is not attached to the open data file because a view is linked to a unique data file. In case of mismatch, you get this message :



Dictionary manipulation

Introduction

When you see the dimensions with their corresponding labels, means that CUB.X has found the dictionaries and associated them with each dimension. All the following conditions have to be respected

- ⇒ the associated files .DIC exist.
- ⇒ the dimension and the file .DIC have the same name. The file name is limited to 8 characters. So, for example, for the dimension "eecountry", the corresponding dictionary will be "eecount.dic".
- ⇒ CUB.X finds the dictionaries in the defined directory built automatically from the dictionary root. If CUB.X doesn't find any dictionaries, you have to indicate where they are stored. (See also page 22 : 'Change dictionary root').

Checking dictionary

Dictionary and dimension

To verify what each dimension uses as dictionary

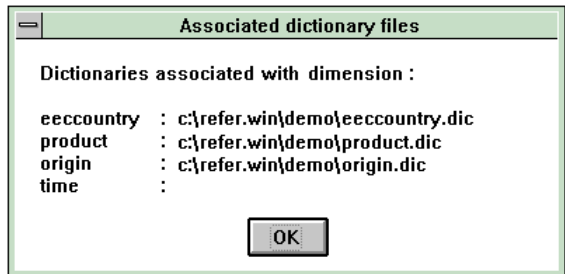


➤ From the Dictionary menu, choose Dimension

➤ (ALT, D, I)

This dialog box appears, and you can verify each dimension :

The storing of dictionaries follows the same logical structure as the data files.



Path for labels in menu dictionary

To see and verify all paths where Cub.X searches for the labels



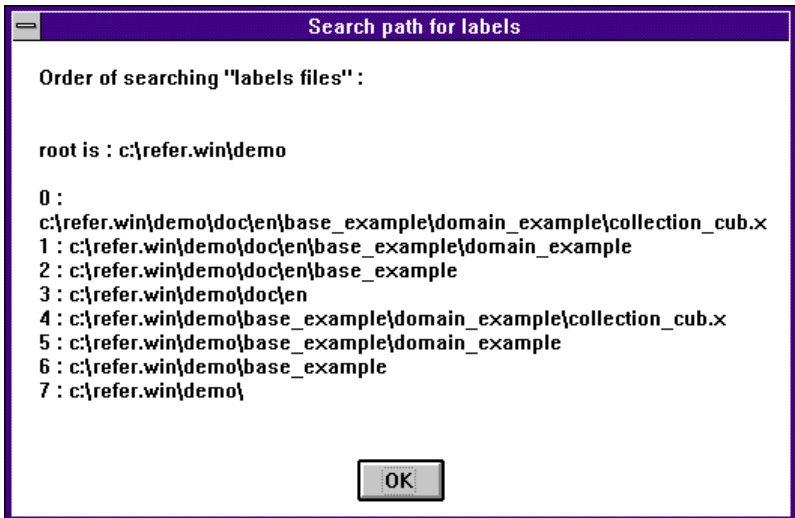
➤ From the Dictionary menu, choose
Search path for the labels

➤ (ALT, D, E)

There are many paths, because there are a lot of possibilities to store these files. CUB.X builds these paths from the root directory which is the basic directory used to find .DIC file for each dimension ; (to build the root dictionary, see the next page).

Example :

In this figure, you can see all the paths that CUB.X builds and where it searches for the labels (the files .DIC) to associate them with each corresponding dimension.



The chosen language is English in the path, you can see "en", because the English dictionaries are in the directory "en".

In accordance with the selected language (Options/Language), CUB.X builds the paths and can open the dictionary in the corresponding language.

For example, choose the language French. To check the new path, choose the command *Search path for labels* from the menu Dictionary. The "en" from the previous figure has become "fr".

Change of language

Refer to 'Displaying data'

Changing the dictionary root



- From the Dictionary menu, choose Dictionary root.
- Choose the dictionary directory

➤ (ALT, D, D)

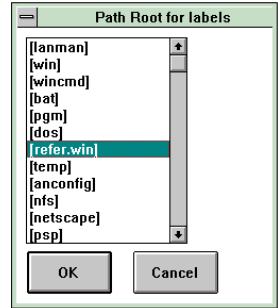
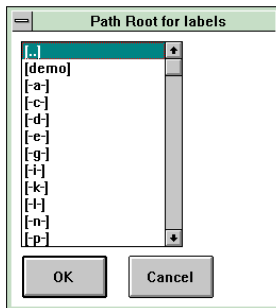
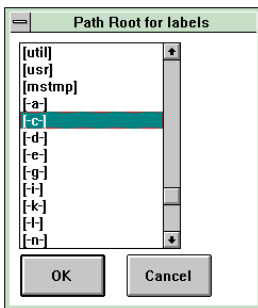
The dictionary mechanism is activated from the directory root. This top directory is the basic directory which is used to find the .DIC file for each dimension.

Example

Choose the drive where Cub.X will find the dictionaries.

Go on the root of the drive

Choose the "top" directory of the dictionaries



When you are on the root of the drive, and see all the top directories of the drive, select the top directory where the dictionaries are stored, **don't go further**.

The screen shows you the directory used for the demo example, which possibly doesn't correspond to the directory of your data files.

- 1 Click (**only once**) on the top dictionaries' directory, to select it.
- 2 Click OK

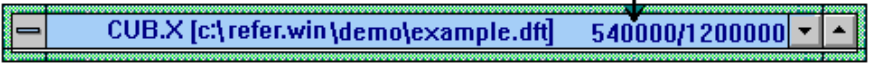
When you select the root directory, you must stay on the main directory **without going further** because Cub.X builds the path automatically. If you should go deeper in the tree structure, Cub.X will build an erroneous path.

Export manipulation

 **Important before exporting data**

Exporting a lot of data can use up a lot of resources **risks freezing your PC for a very long time**

Number of cells to export = number of selected cells



It is better and faster to export several two-dimensional tables
(the displayed XY table that interests you),
rather than a large multi-dimensional table.

Introduction


You use the Cub.X command Export to export data or to be able to read data in different formats. Remember that whatever method you choose to export data, only the selected data will be exported.

Two ways to export data to be used in another application are provided :


- Use the Windows'Clipboard
- Use the Export facility

Windows' Clipboard

Copy all the positions You want to export the displayed table (X and Y) with all its positions

 ➤ From the Edit menu, choose Copy XYall ➤ (ALT, E, A)

Copy selected positions Having unselected some positions in a presentation, you want to export the displayed table (X and Y) with only its selected positions

 ➤ From the Edit menu, choose the command Copy XY selected ➤ (ALT, E, S)

Export facility

Export multi-dimensional tables

To export XY

To export the data displayed in a two-dimensional table



- From the Options menu, see the command XY export mode (otherwise All)

- ⇒ To export XY, the command must be *checked*

Click the menu Export, and choose the target file format.

Type a new name for the target file.

To export all the possible combinations

To export all the data



- From the Options menu, see the command XY export mode (otherwise All)

- ⇒ To export **all** the data, the command must be **NOT** *checked*

Click the menu Export, and ~~choose~~ the target file format.


Type a new name for the target file.

Note : if labels are not displayed, they will not be exported. Please see "Display data".



Do not use reserved extensions like .XLS, .DOC, etc. It is better to make the distinction between your exportation files and other applications files.

Export formats

Export	To choose the export format
	➤ From the Export menu, ➤ (ALT, X, or)

Choose the export format you want to use : Table, Stream or Eurostat

➤ select again between the options provided	➤ (→, or) Press Enter
---	---------------------------

Table : three different table formats are available.

DIF	Data Interchange Format Only for XY tables and accepted by most of the well-known spreadsheets on the market.
EXCEL/TAB	This option allows tables to be input to the EXCEL system. In fact, this format is a "tab delimited" format, each cell being enclosed by a double quotation mark "<"> and separated with a <tab>.
CSV	Comma Separated Values This format is the same as that of EXCEL except that the delimiter between all fields is the comma <,>. This kind of file is accepted, for instance, by the IMPROV program.

Stream : three different kinds of file are available.

dBASE	Accepted by dBASE software, this file has X + 1 fields with X = number of dimensions 1 = value (last field).
Text	This format is a text file with X + 1 columns X = number of dimensions 1 = value (last column) The separator between columns is a <space>.
CSV	Same format as Text but using double quotation marks "<"> to enclose the contents of each column and a comma to separate the columns.

Eurostat: the three formats (Fame, Osiris and Gesmes) are internal to Eurostat.

Help

Help Menu

CUB.X general Help

To get help about Cub. X
File extension : filename.HLP

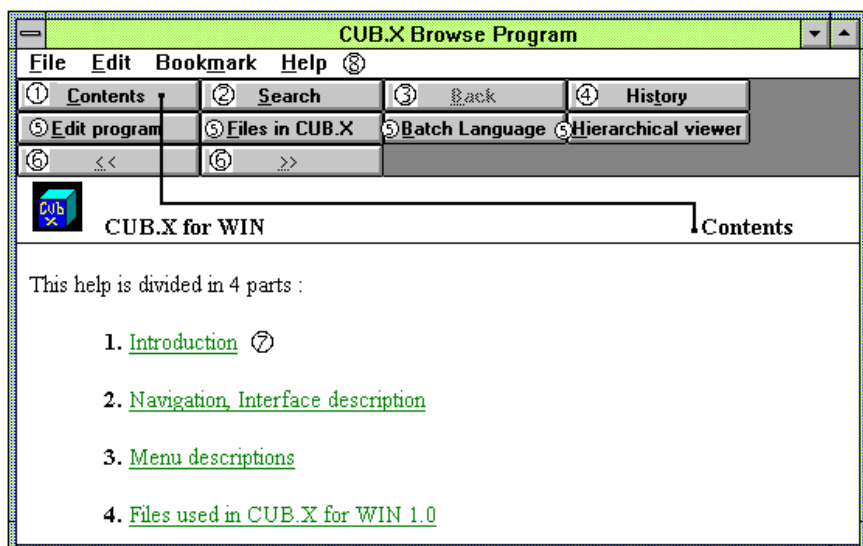


➤ From the Information and Help menu,
choose Help

(ALT, I, H)

Note : you are in a file managed by MS-Windows.

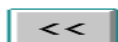
Help Interface



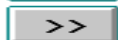
to : managed by Windows'Help program

Opens automatically the specific help files.

2 buttons :



to go to the previous page.



to go to the next page.

Jump to a cross-reference : if you click any term or phrase in colour and/or underlined, you go straight to the specific part of the help file.

Menu Bar : managed by Windows'Help program.

This page is left intentionally blank for your notes...

A memo on



Regular expressions (Unix)




Definition

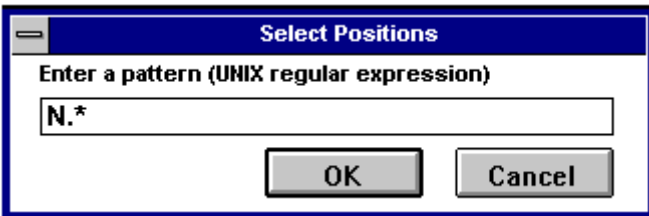
A regular expression is a form used to specify and match strings. Regular expressions use *metacharacters* (characters with a special meaning) and *nonmetacharacters*(normal characters) as described below.

Introduction

The regular expression allows you to make some selections (to highlight them) or to remove existing selections (to remove the highlighting) in order to Select or Unselect them.

Using regular expressions replaces a series of the actions with the mouse in the dialog box before clicking  or  to effect the transfer between the selection and unselection boxes :

- 1 Click the select button 
- 2 In the "select - unselect positions" dialog box that appears, you click  to highlight the item to select or unselect ; and you click  to remove this highlight.
- 3 The following dialog box appears : you enter a regular expression that will allow you to highlight (or to remove) the existing items.



A regular expression is a formalised way of describing a pattern which is then used to search (in this case) the labels with a view to select or unselect automatically.

For example, the regular expressions 'N.*' finds all the labels beginning with a capital N (N followed by zero or more character of any sort - "*" meaning "any single character" and "*" meaning the "occurring 0, 1, 2... times).

Regular expression Metacharacters

To build a regular expression, you will need some of the following metacharacters. Here are all the metacharacters (MC) supported in CUB.X.

MC	Name	Meaning	MC	Name	Meaning
\	back-slash	protection	(left parenthesis	begin of expression
^	caret	negation)	right parenthesis	end of expression
[left square bracket	begin of class	*	asterisk	repeat 0,1,2,... times the expression to its left
]	right square bracket	end of class	?	question mark	repeat 0 or 1 time the expression to its left
	pipe	logical OR	+	plus	repeat 1,2,3... times the expression to its left
.	dot	any single character			

Basic expression

A basic *expression* is one of the following :

Nonmetacharacter

A If you write A, you will match the letter A

Quoted metacharacter

***** Matches one of the special metacharacters, in this case the asterisk "*".
With "\", you cancel the effect of the metacharacter.

Character class

[ABC] Matches any one of the characters A B or C

[A-Z0-9] Matches one letter from A to Z (only in uppercase) or a digit.

Complemented character class

[^0-9] Matches any character except a digit.
Note : the ^ (negation) is active throughout the class.

Operators

These operators combine regular expressions into longer ones :

- Alternation** **A|B** Matches A or B (uppercase)
- (AB) | (CD)** Matches AB or CD, but not A or B or C or D

- Concatenation** **AB** Matches uppercase A immediately followed by uppercase B

- Closure** **A*** Matches zero or more A's { \emptyset ; A ; AA ; A...} (nothing or one or many uppercase A's)

- Positive closure** **A+** Matches one or more A's {A ; AA ; A...} (at least one uppercase A)

- Conditional closure** **A?** Matches zero or one A's : { \emptyset ; A} (nothing or one A)

- Parentheses** **(r)** Matches the same strings as the expression 'r' does ; used to group many expressions, and also to give them priorities.

Use the labels for selection

To make selections with the labels of the dimension	working with the regular expression
--	--

From the Options menu, look at the command Labels .
--

When you use a regular expression, you can do the selection on the entire label or on the abbreviation ("Belgium" or "be") : in the selection boxes, you will always have the abbreviations, so you must work with labels from memory, or place the dialog box in a such way that you can see the labels from the displayed table.

➤ To scan the entire set of labels with a regular expression, there must be a check mark (<input type="checkbox"/>).
--

For example : for the dimension "beccountry", you can write "Belg.*" to select Belgium, only if you use the entire label.

No check mark means that you use the abbreviation "b.*"

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Minimum Hardware and System Requirements

a 80486 PC based computer,

at least 10 megabytes of hard disk space

MS-DOS 5.0 and MS-Windows 3.1 (Enhanced mode) or later

a CD-ROM drive (x2 minimum).