

TRUE

TEMPORAL REASONING UNIVERSAL ELABORATION

True System dynamics software

MANUAL Part 02

Model

Last release 2014/04/24

www.true-world.com

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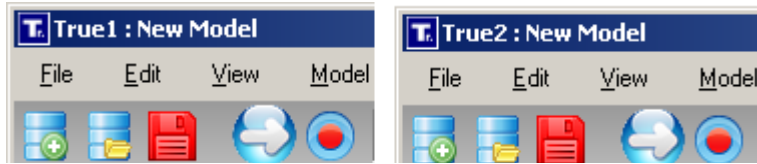
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I - MAIN WINDOW

A) Main Window title

TRUE software can be launched several times.

Instance number is displayed within the title of the windows on left side, after 'True'

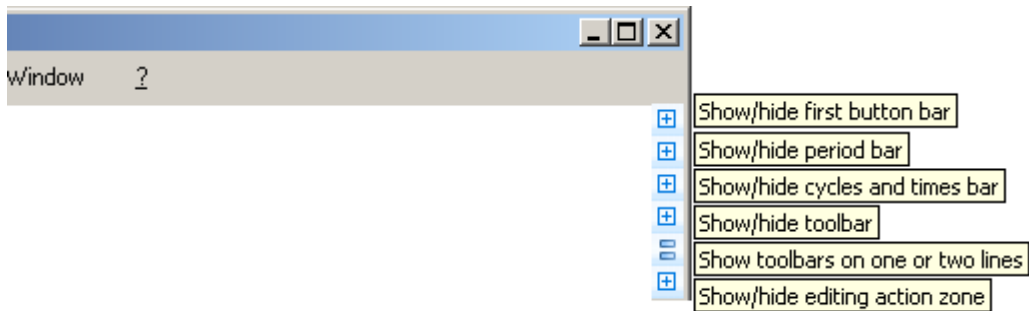


B) Toolbars

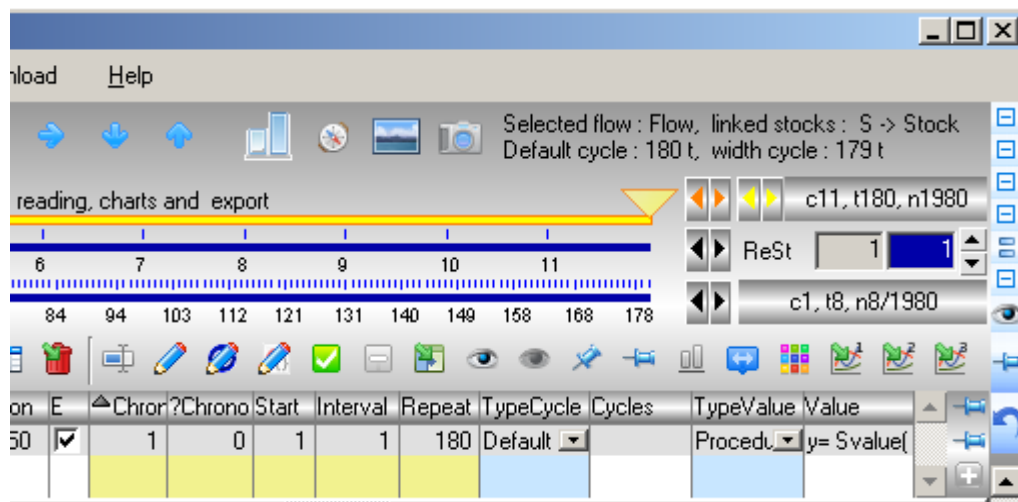
Tool bars can be displayed or hidden

- ❑ click on the left button to display or hide the toolbars

All the toolbars are hidden

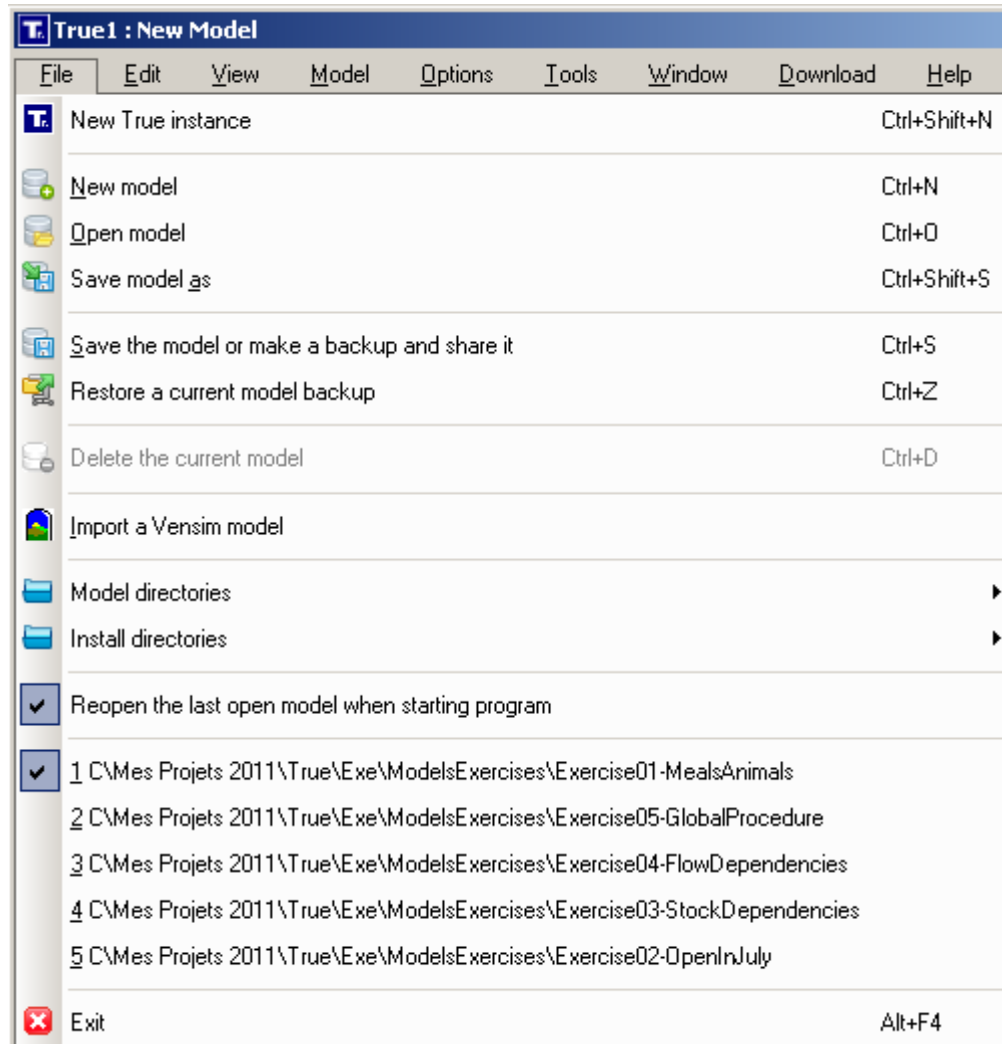


All the toolbars are displayed



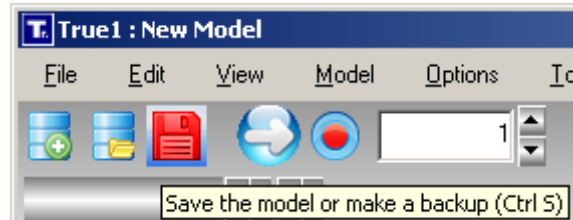
II – FILE MENU

File menu

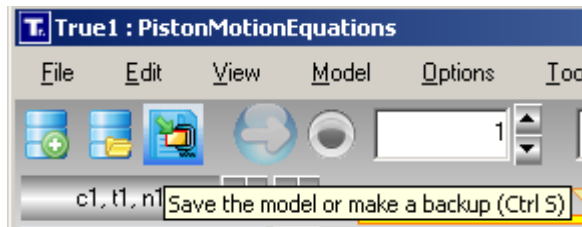


1. New model, save, save as, making a backup

- ❑ After creating a new model, the 'Save the model' button is red



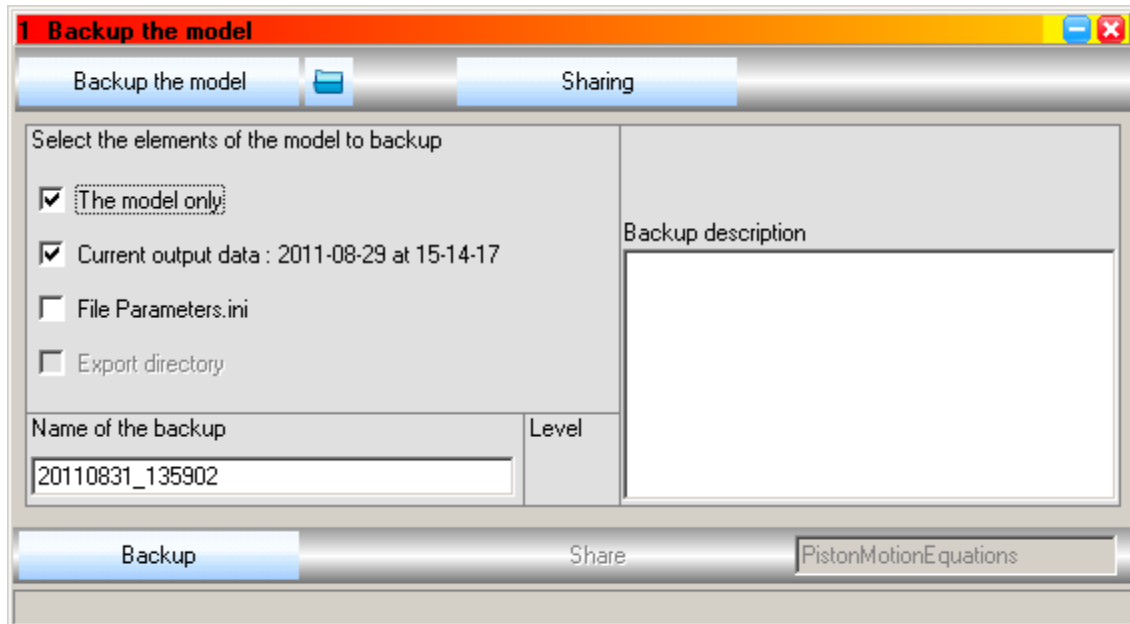
- ❑ After saving a new model, the 'Save' button is blue with a zip icon



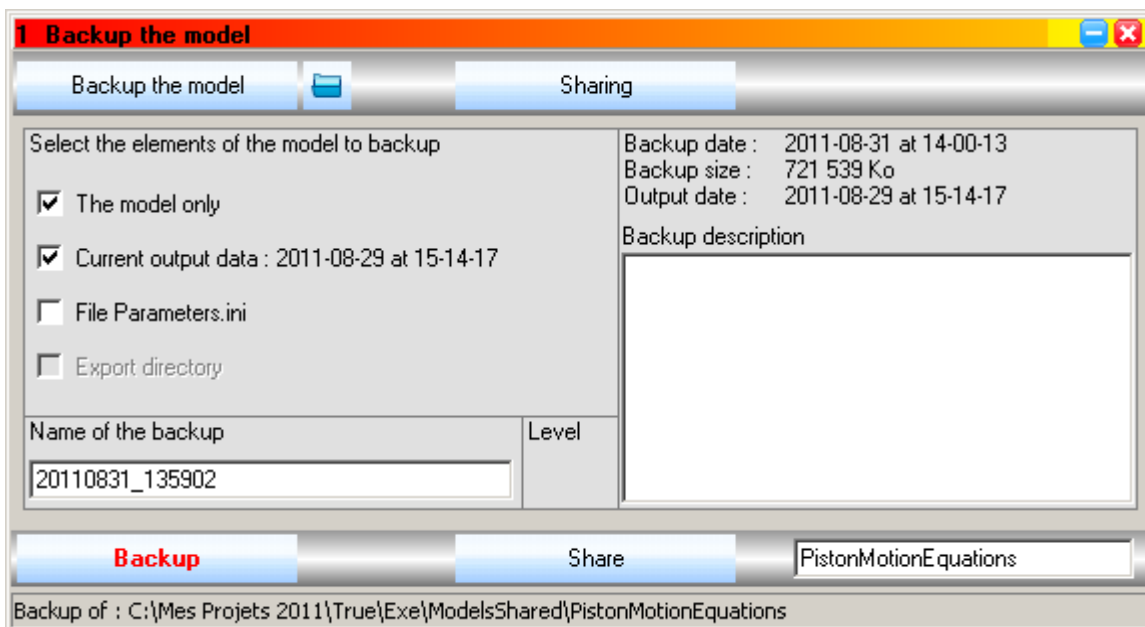
- ❑ All the changes within a saved model are immediately proceeded, their cancelling being impossible
- ❑ However, the user has the possibility to make a backup of the model, by pressing the Ctrl+S key or clicking the 'Save' button

2. The backup of a model

- ❑ Click on the 'Save' button or press the Ctrl+S key (the model must have been saved once)
- ❑ or select the 'Save the model or make a backup' option from the 'File' menu



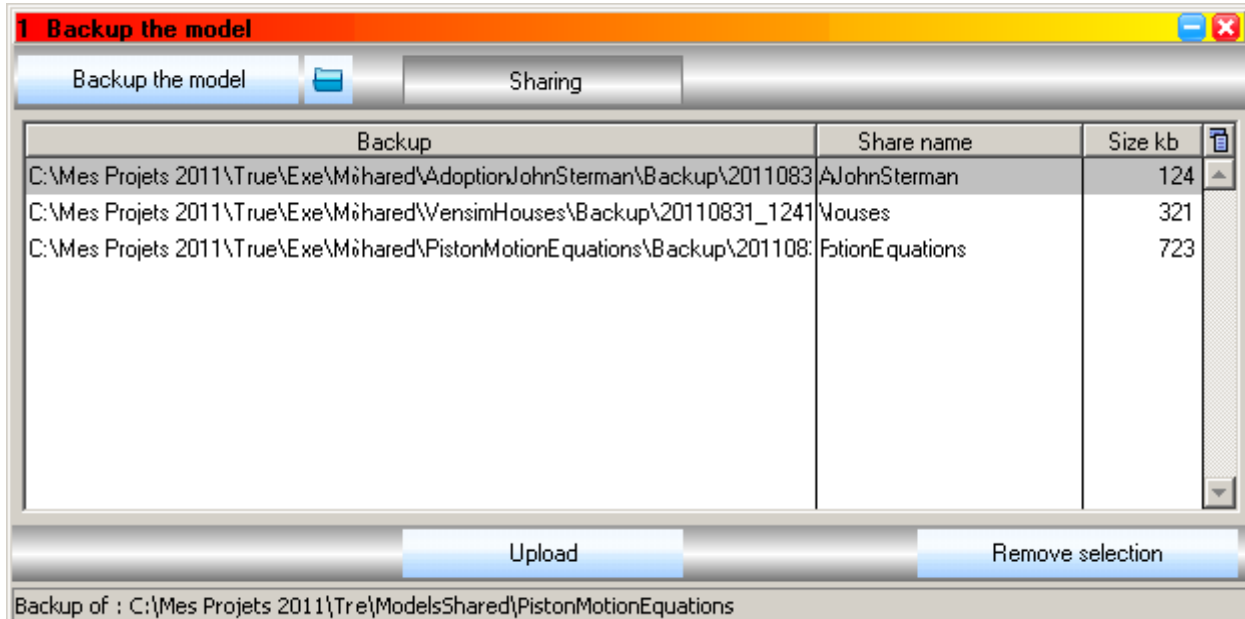
- ❑ Select 'Backup the model'
- ❑ Enter a description of the backup
- ❑ Select what you want to backup
- ❑ Click on the 'Backup' button



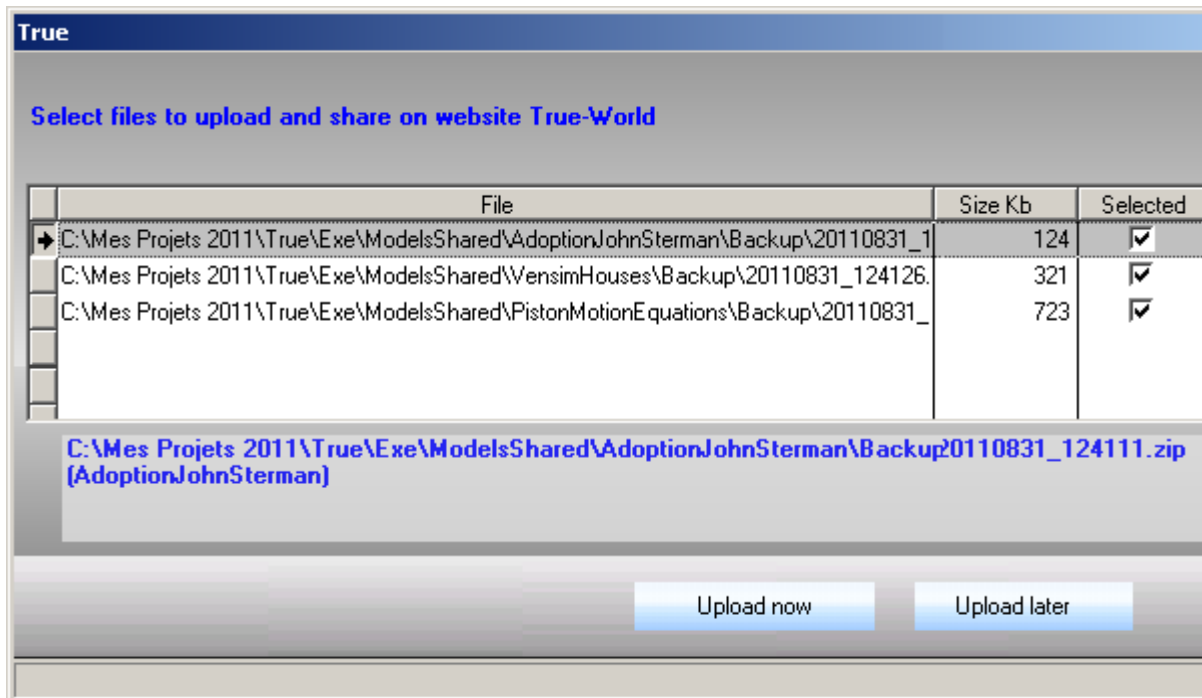
3. Sharing a model (sharing a backup of the model)

After creating the backup of the model

- ❑ Click on the 'Share' button
- ❑ Click on the 'Upload' button

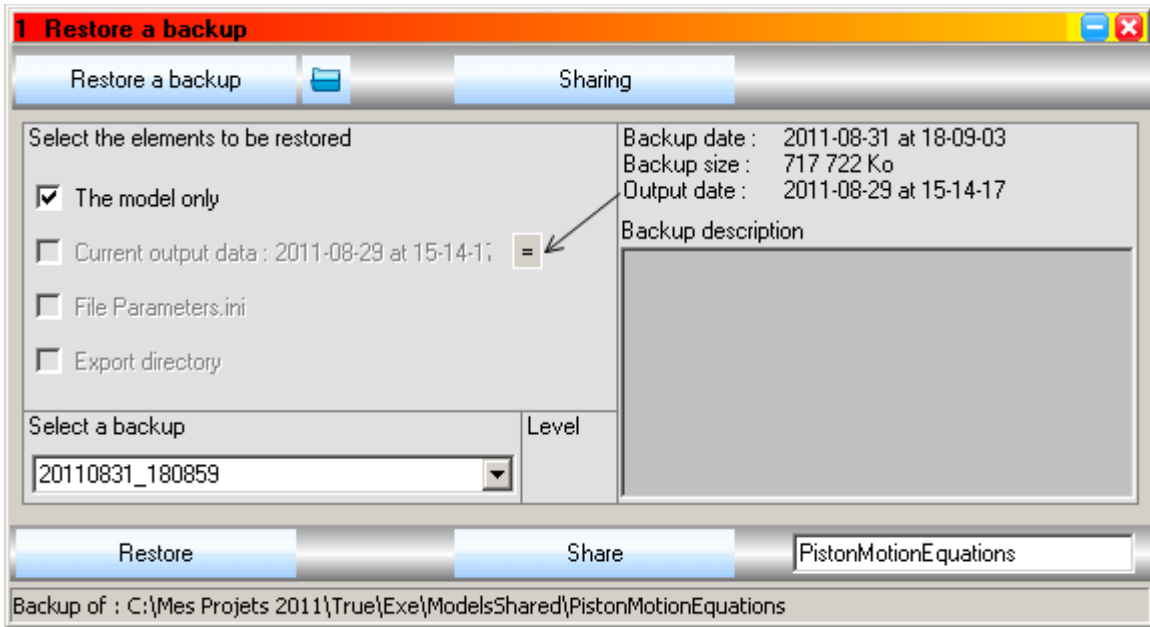


- ❑ Click on the 'Upload now' button (to the server of True)

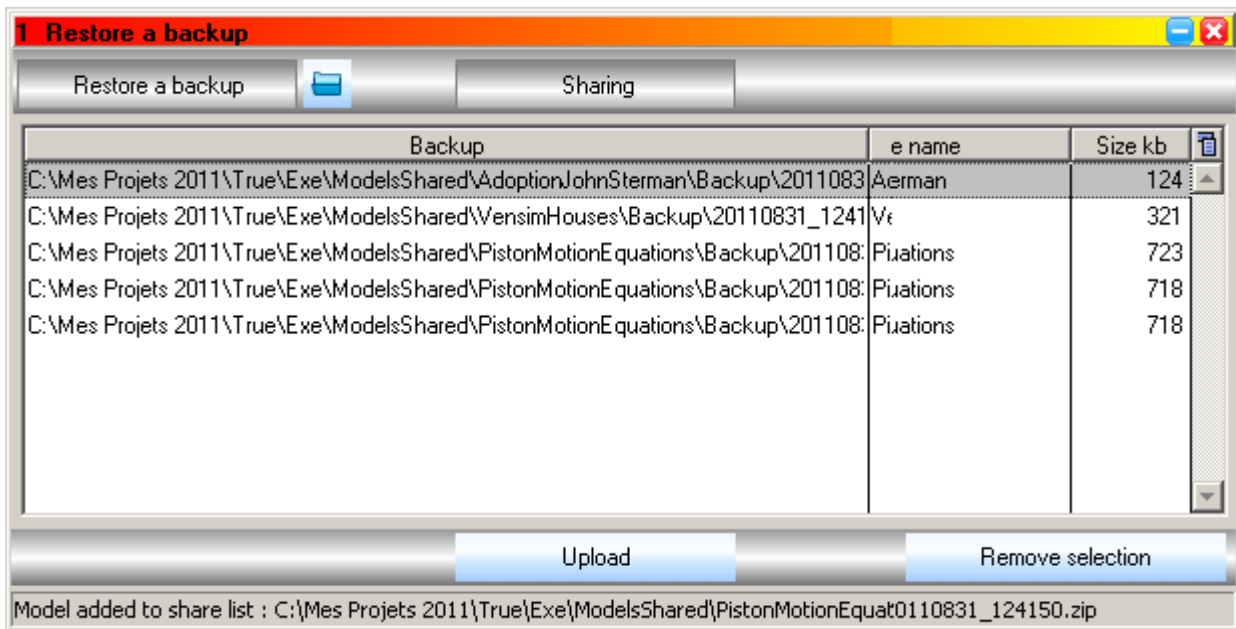


4. Restoring a backup

- ❑ Press the Ctrl+Z key (the model must have been backup once)
- ❑ or select the 'Restore a backup of the current model' option
- ❑ Select a backup
- ❑ Select the elements to be restored : the model, output data, and so on.



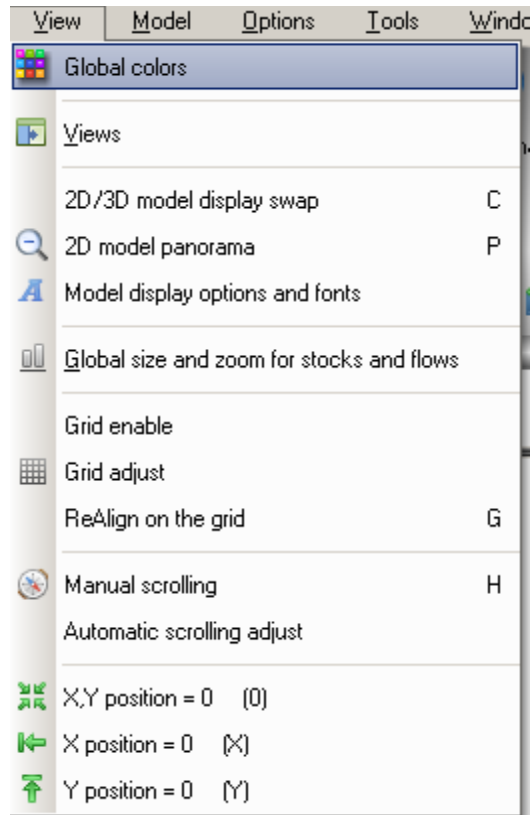
- ❑ Click on the 'Restore' button
- ❑ To share a backup : click on the 'Share' button



- ❑ To remove a backup from the list : click on the 'Remove selection' button

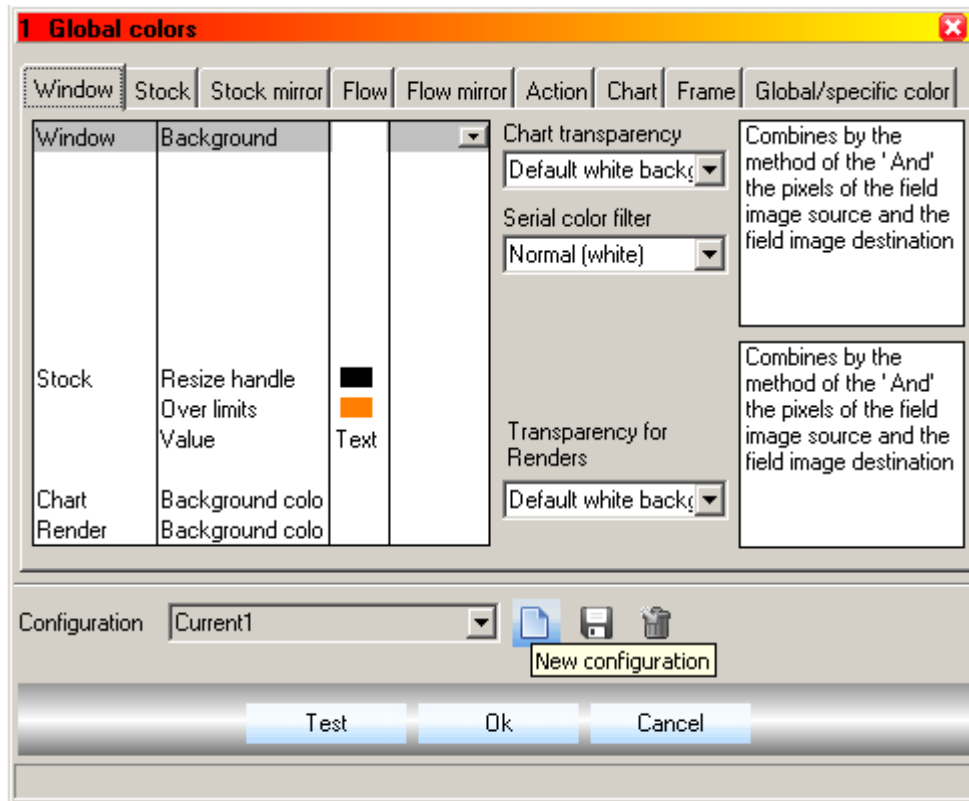
III - VIEW MENU

View menu



A) 'Global colors' option

'Global colors' window



- ❑ setup color and style of the elements within the model
- ❑ setup the transparency of the charts and render
- ❑ store many configurations of color
- ❑ restore the default configuration color :
 - White : default configuration for the white background
 - Black : default configuration for the black background

1. New color configuration

- ❑ click on the 'New configuration' button
- ❑ enter the name of the new configuration
- ❑ setup colors and styles
- ❑ save

2. Modifying the background color of the model

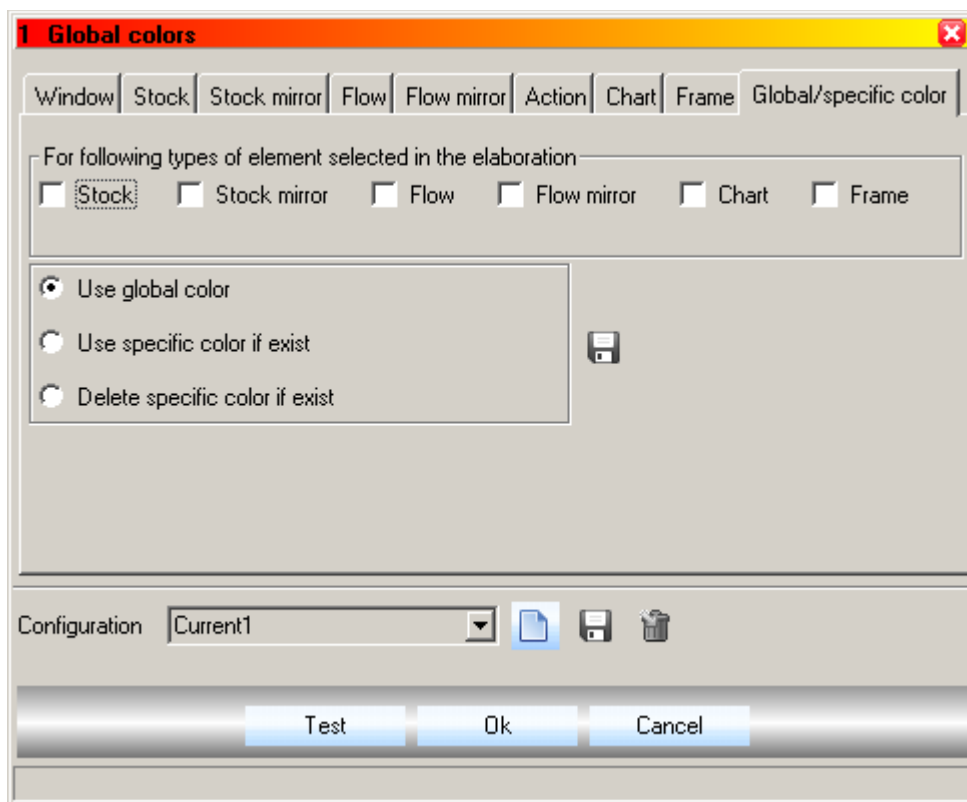
If the background color changes, the transparency must be adapted.
This is automatically done for White and Black default configurations

3. Global or specific colors

There are two types of colors, global colors and specific colors.
Specific colors are specifically affected by one or several elements.

- check the boxes for selected element within the model

'Global/specific color' plan



Delete all specific colors of the selected elements within the model :

- select the elements within the model or
- press the Ctrl+A key to select all the elements
- open the 'Global color' window
- select the 'Global/specific color' plan
- check all the boxes
- select the 'Delete specific color if exist' radio button
- click on the 'Save' button, placed on the right side

B) View option

This option opens the 'Views' window. This window can also be opened with the 'View 01' button located on the bottom left corner of the main window.

1. 'View' window

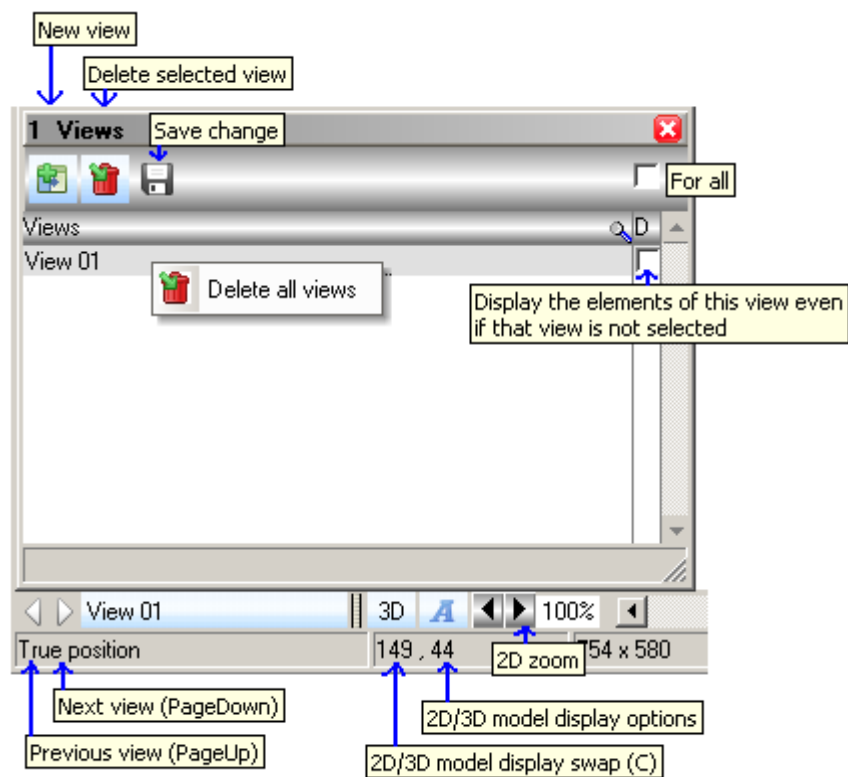
To select a view :

- ❑ select the view in the 'Views' window or :
- ❑ click on the spin below the View window
- ❑ several views can be displayed together : check the 'D' (display) column from the table

To add or delete a view :

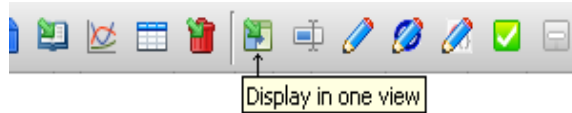
- ❑ click on the 'New view' button in the 'Views' window :
- ❑ click on the 'Delete a view' button or select the 'Delete all views' option from the popup menu

To rename a view: click on the line of the table: rename the view and click on the 'Save change'



2. Assigning elements to a view

The stocks, flows, frames, charts or renders, can be displayed in one or more views. To assign one or more elements to a view, use the 'Display in one view' button.

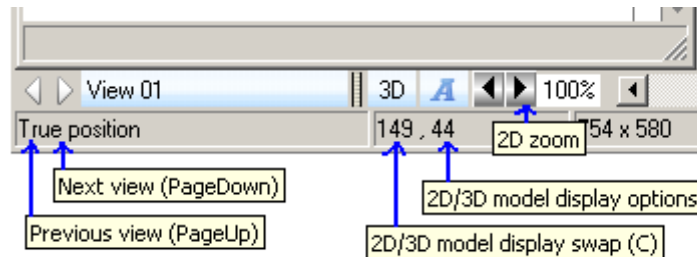


- ❑ click on the icon 'Display in one view'
- ❑ click on one element or select several elements and click on the selection
- ❑ select the view in the 'Views' window

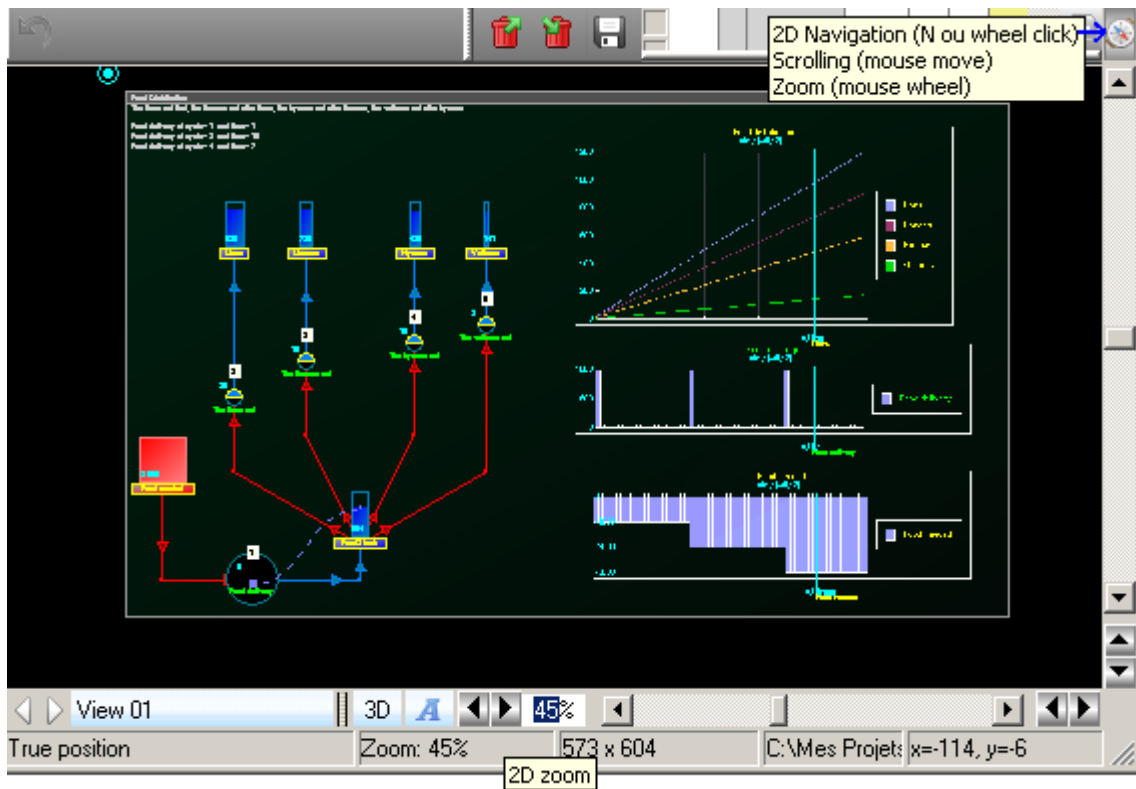
C) 2D/3D model display swap

Select this option to display the model in 3D or in 2D:

- ❑ or click on the 3D button or press the key 'C' (to swap between 3D or 2D view)

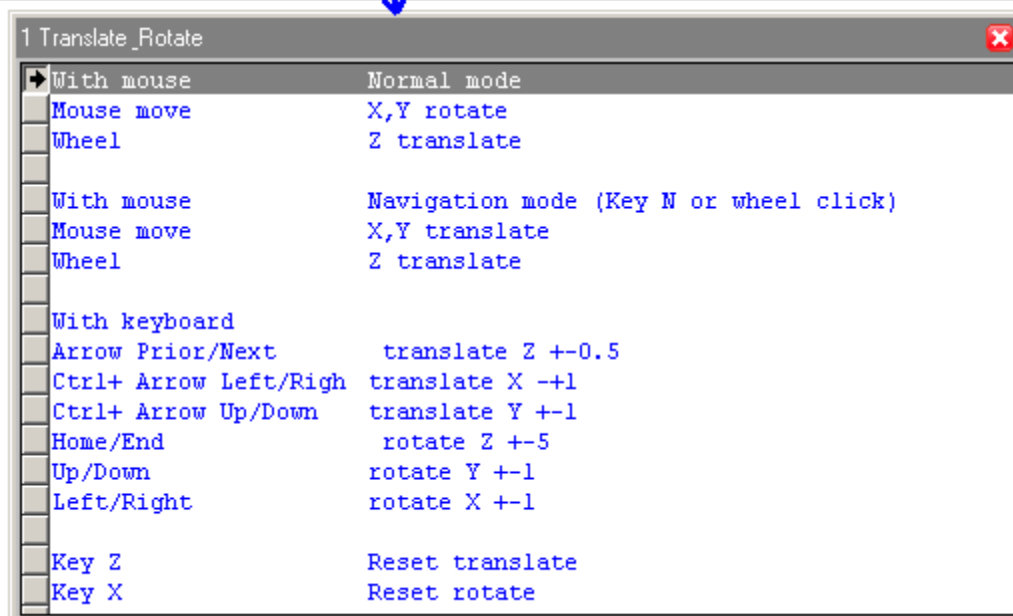
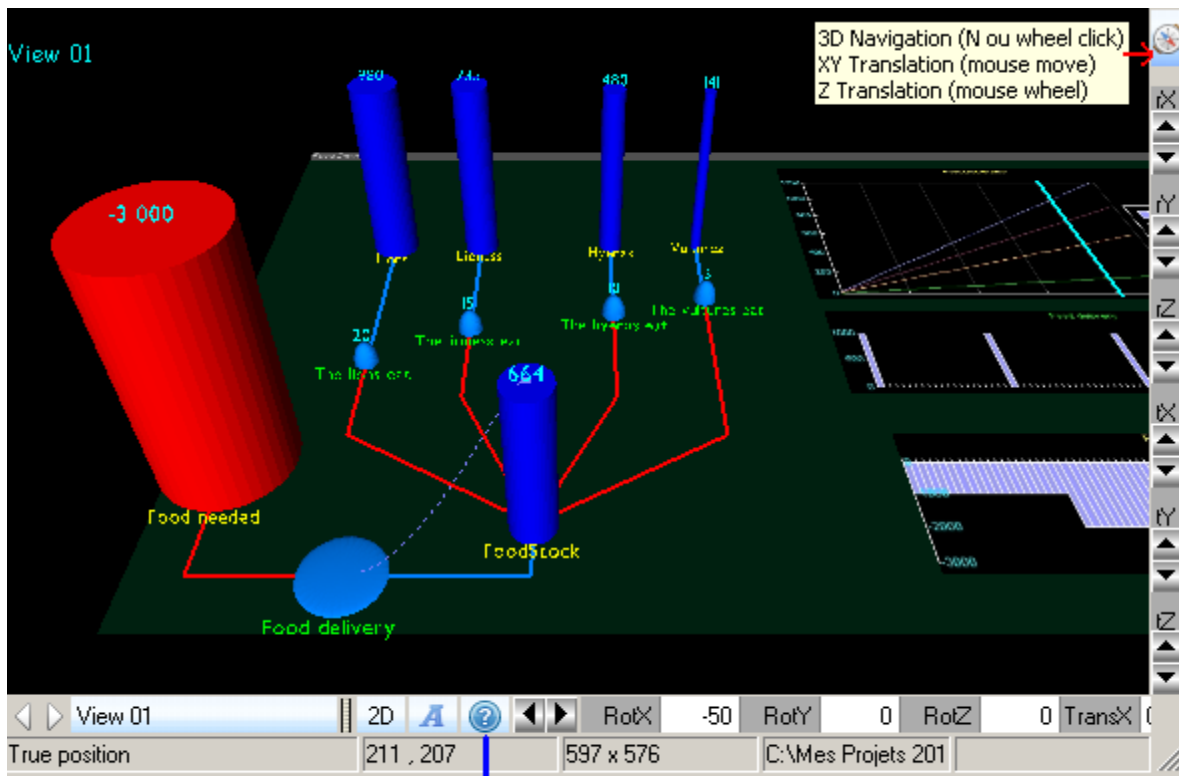


2D view



- adjust zoom spin or tape the zoom level on the zoom field
- to navigate and to zoom in the 2D view: click once on the wheel or press key 'N', after press the left button and move the mouse, or adjust the wheel

3D view

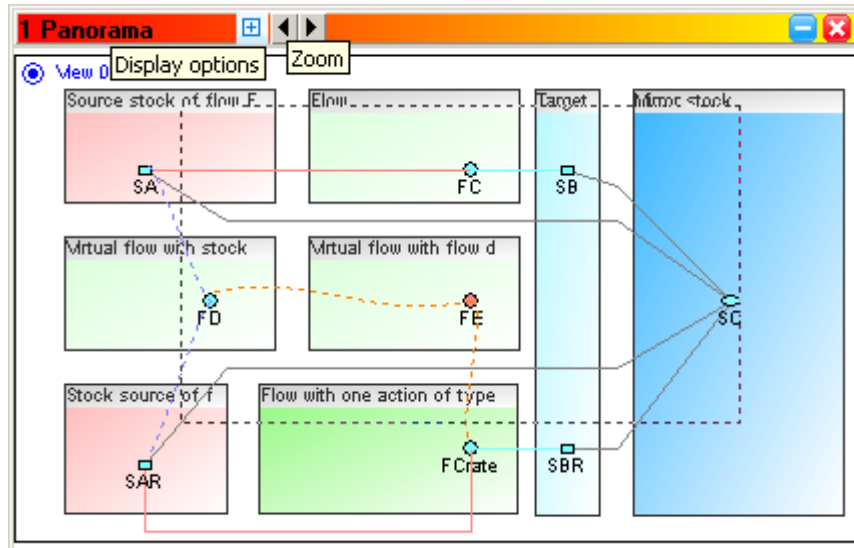


- ❑ adjust rotate and translate with spin or mouse or keyboard
- ❑ to navigate and to zoom in the 3D view: click once on the wheel or press key 'N', after press the left button and move the mouse, or adjust the wheel

D) Panorama

By selecting the 'Panorama' option, the 'Panorama' window will display the elements of the model:

'Panorama' window



Panorama zoom adjustment:

- click on the spin zoom to adjust the zoom

To display the options and fonts window:

- clicking on blue button +

1) To display a part of the model in the main window

Display the part of the model outlined in dotted lines:

- in the Panorama: click down and move the mouse

2) Moving an element

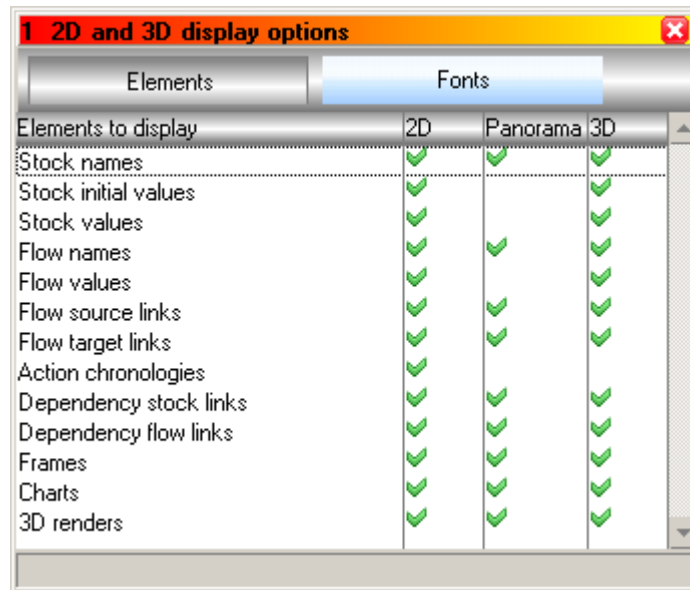
To move an element with Panorama :

- select an element in the model
- drag and drop it in the Panorama

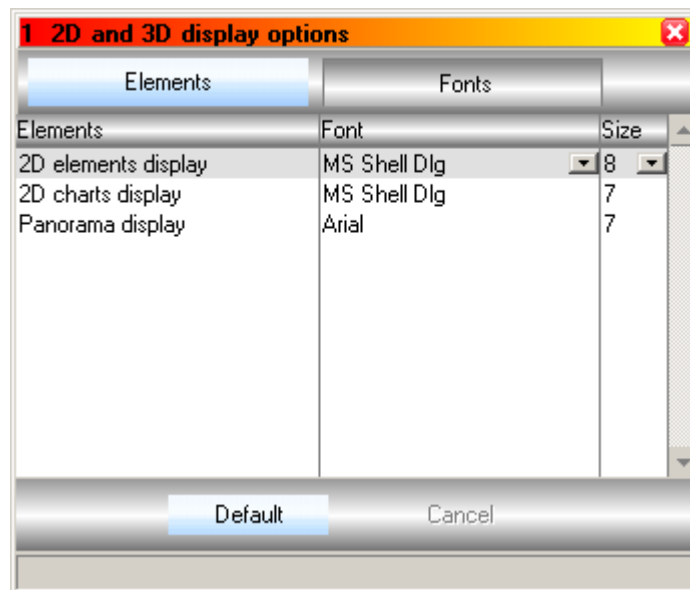
E) 2D and 3D display options and fonts

- ❑ check the boxes to or not show the elements

Elements plan



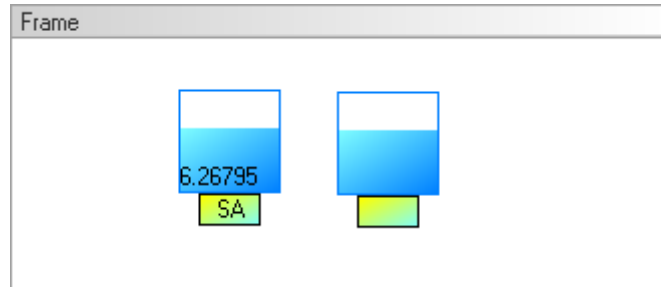
Fonts plan



1. Stocks

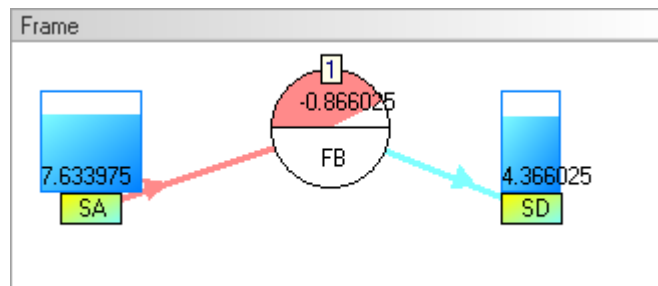
On left: stock displayed with all parts

On right: without value and name

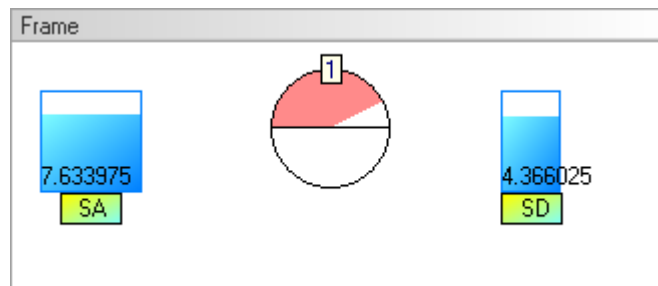


2. Flow

Flow displayed with all parts



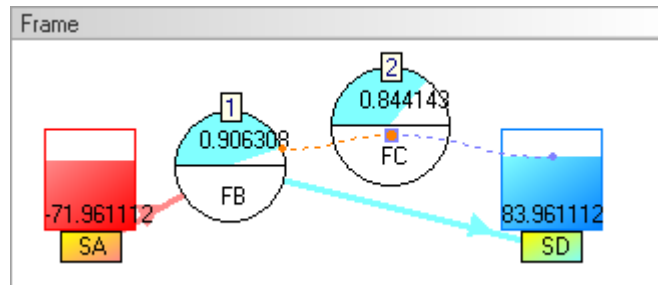
Flow without name, value, source and target link



3. Actions

Chronologies 1 and 2 of the actions of the flows 'FB' and 'FC'

From flow 'FB' and stock 'SD' : causality links towards flow 'FB' and stock 'SD'

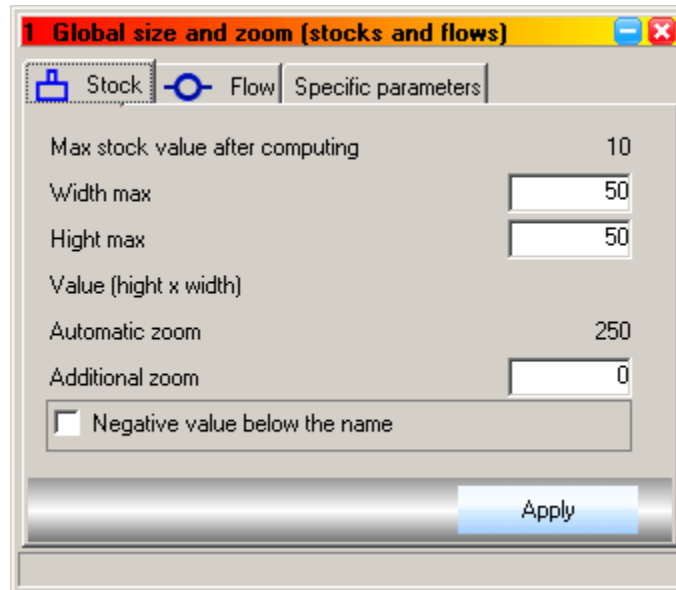


F) Global size and zoom for stocks and flows option

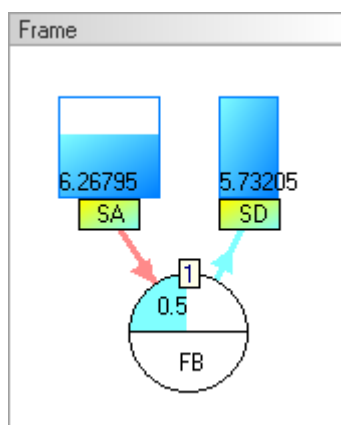
1. Stock value

While computing, the maximum absolute value for stocks is memorized. The automatic zoom value for the stock is calculated after computing.

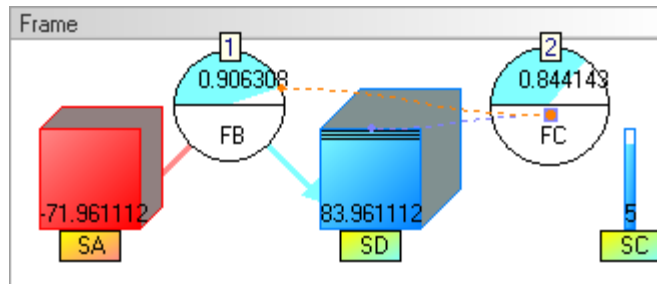
Global size and zoom for stocks window



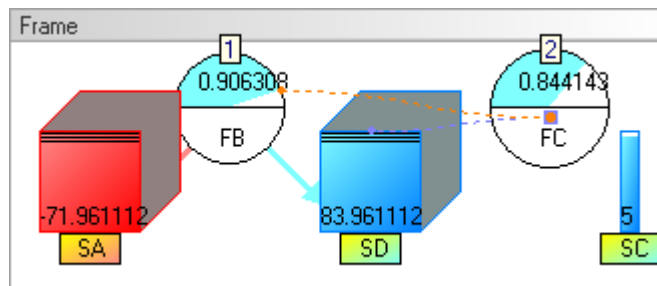
- ❑ Adjust the width and height max size for the value rectangle
- ❑ Example : 50 x 50 pixels : the width is adapted to display the maximum value of the stock in the rectangle



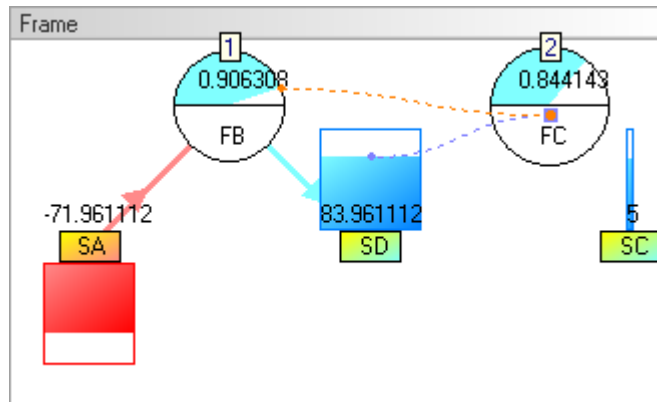
- ❑ Adjust the additional zoom if necessary, to see stock with low value
- ❑ Example : additional zoom = 2



- ❑ Example : additional zoom = 4, observe the saturation line on top of stock SA



- ❑ The option 'Negative value'.... allow to displayed the rectangle below the name of the stock when value is negative



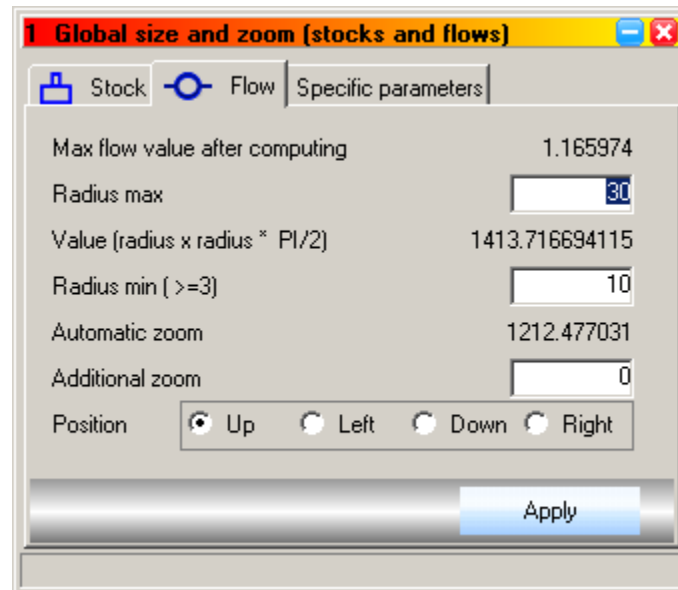
1.1 Specific size and zoom for stock

- ❑ Click on the 'Specific size and zoom' button from the right toolbar and click on the stock
- ❑ Adjust the size for the stock and click on the 'Apply' button

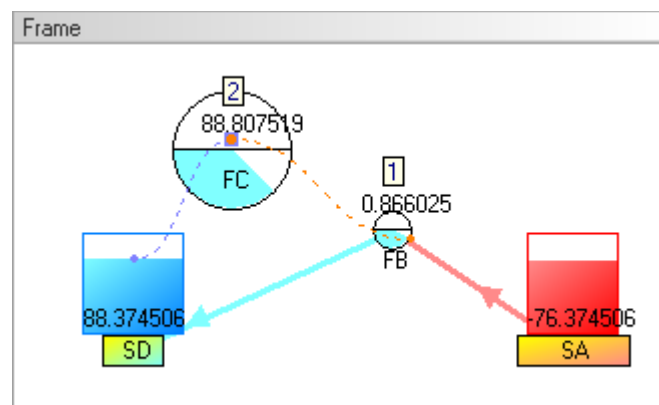
2. Flow

While computing, the maximum absolute flow value is memorized.
The automatic zoom value for the flow is calculated after computing.

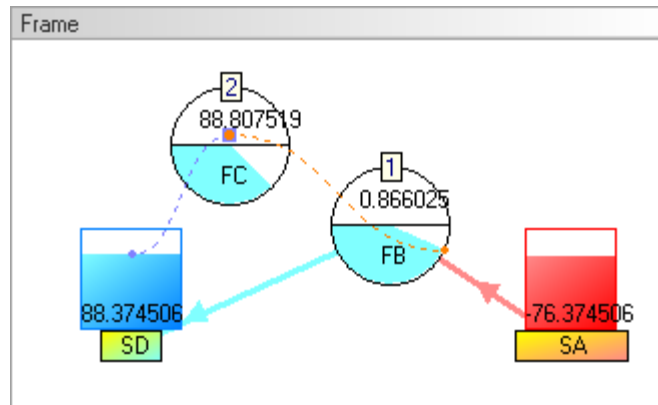
Global size and zoom for flows window



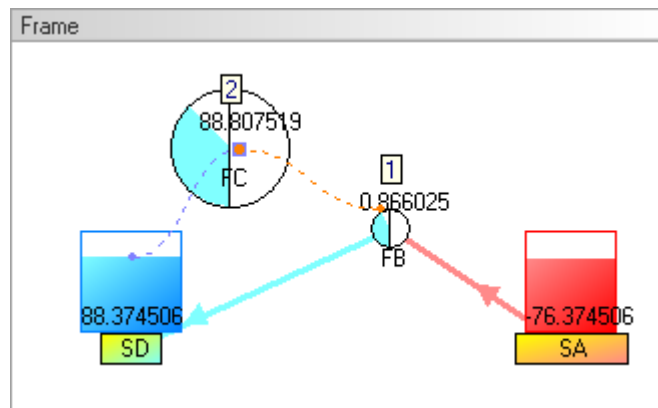
- ❑ Adjust the maximum and the minimum radius for the flows
- ❑ Example : maximum radius = 30, minimum radius = 10



- ❑ Adjust if necessary the additional zoom
- ❑ Example : additional zoom = 3



- ❑ Adjust if necessary the position of the value
- ❑ Example : position = left



2.1 Specific size and zoom for flow

- ❑ Click on the 'Specific size and zoom' button from the right toolbar and click on the flow
- ❑ Adjust radius and position for the flow and click on the 'Apply' button

G) Magnetic grid

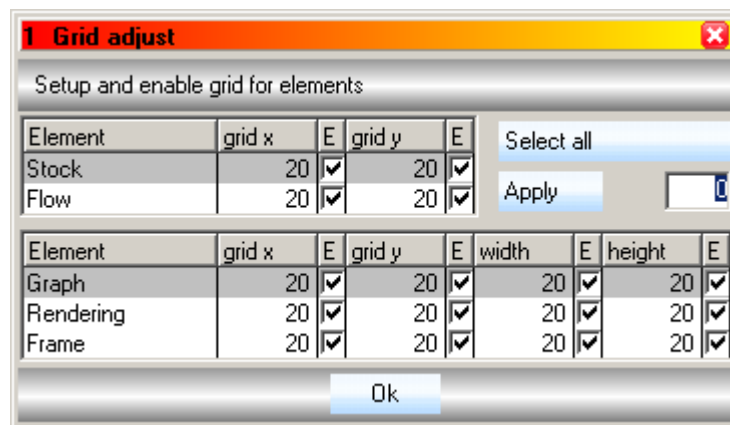
1. 'Grid enable' option

- ❑ select this option to enable the magnetic grid :
the elements will be resized according to the values initialized in the 'Grid adjust' window

2. 'Grid adjust' option

- ❑ check the 'E' boxes
- ❑ set the values of the grid
- ❑ Apply and Save

'Grid adjust' window



H) Scrolling

1. 'Manual scrolling' option

Enabling the manual scrolling :

- ❑ select the 'Manual scrolling' option or :
- ❑ press the 'H' key or :
- ❑ click on the 'Navigate(H)' button
then :
- ❑ move the model with the mouse
- ❑ A compass will be displayed together with the x,y position and direction of the middle

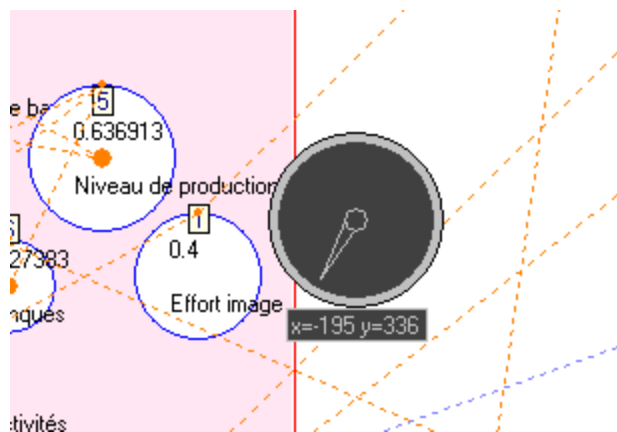
'Navigate (H)' button



Cancel the manual scrolling

- ❑ pressing again the 'H' or 'Escape' key or :
- ❑ right-clicking the mouse on the model

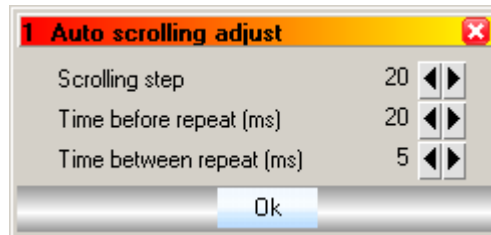
The compass



2. 'Automatic scrolling adjust' option

While moving one element near the window, the model automatically scrolls.

'Auto scrolling adjustment' window



- 'Scrolling step' : in pixel
- 'Time before repeating (ms)' : in milliseconds
- 'Time between repeating (ms)' : in milliseconds

3. 'Centre in XY, X, Y' option

To centre the model within the main window on xy, x or y :

- select this option or :
- press the 0, X or Y key

I) Partially displayed causality links, 'Previous position' button

1. Causality links

When the value of one element is used in the action procedure of flow

- ❑ a causality link is displayed between this flow and the element

There are two types of causality links

- ❑ the causality link which is towards a stock : the blue dotted line
- ❑ and the causality link which is towards a flow : the orange dotted line

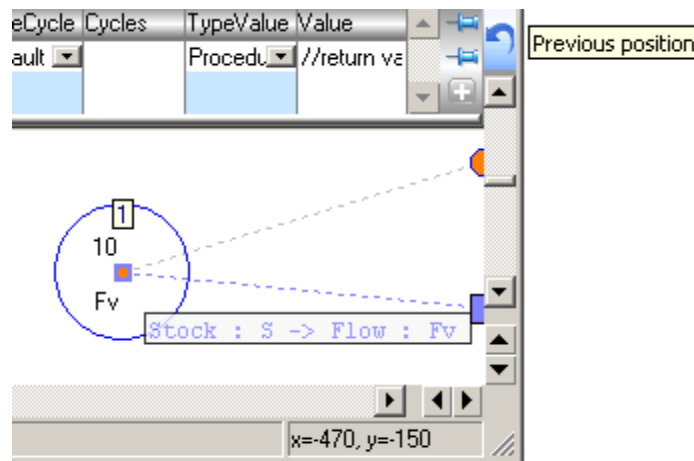
If the called element is not displayed within the model, the causality link ends by

- ❑ a half of rectangle, in case of stocks
- ❑ a half of circle, in case of flows

To display the name of the called element

- ❑ move the mouse over the half rectangle or half circle

On right bottom, one half square and the name of the called stock
(when mouse is over the half square)



To display the called element

- ❑ click on the half rectangle for displaying the called stock
- ❑ click on the half circle for displaying the called flow

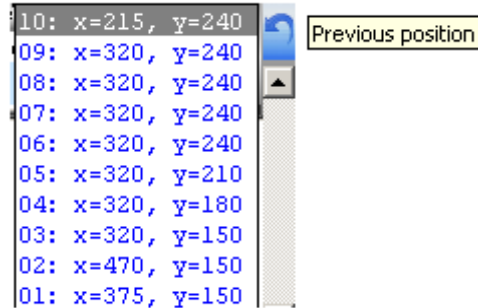
- ❑ the model will be displayed with the element in its centre

2. 'Previous position' button

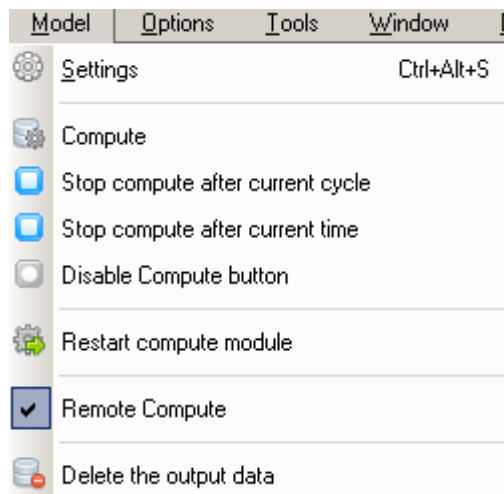
Displaying a previous position of the model

- ❑ click on the 'Previous position' button
- ❑ select one previous position

List of the last positions

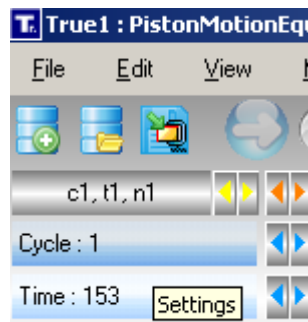


IV - MODEL MENU



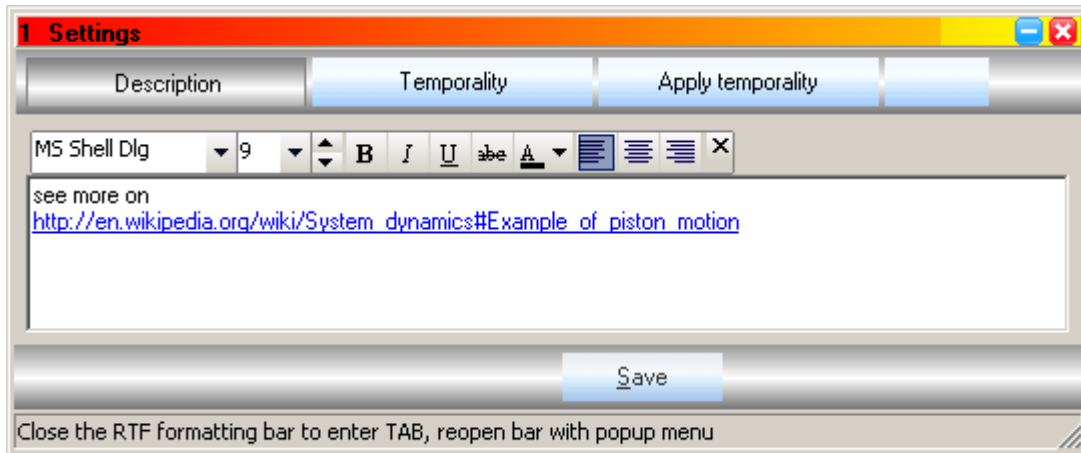
A) Settings

- Press the Ctrl+Alt+S keys or click on the time 'Cycle' or 'Time' field



1. Description

- ❑ Type a description of the model
- ❑ Click on the 'Save' button



2. Temporality

- Click on the 'Temporality' button

1 Settings

Description Temporality Apply temporality Import

Blue parameters are only for information, they don't modify the model and output data

Number of cycle(c) **Label for c**
 It is the number of cycle you want to compile at last. While testing the model, it is faster to compute only one cycle. starting from 2014 Year : 2014

Nb of time unit(t) per cycle(c) **Label for t**
Total number of time unit(nbt) starting from 1 Month : January
 nbt (max) = t(max) x c (max) It is the label for t=1, because t=0 is the past

Continuous time

TimeStepl TIME_STEP = 1 /TimeStepl

In continuous time, the TimeStepl should match the parameter 'Repeat'
 Note: TimeStepl is equivalent to 1/TIME_STEP in Vensim

**Default temporal parameters for the actions:
 The temporality of the model is defined by the red parameters**

Rate If enable, the stocks will be updated by the result of the action (result = y / TimeStepl) at the end of the unit of time, before the transition to the next unit of time (as in Vensim).
 Rate is only effective if the flow links two stocks. If disable, the stocks will be updated by the result of the action (result = y) immediatly after the action has been calculated.

Chronology
 Random chronology

Start The parameters 'Start, Interval and Repeat define the number of time unit (t) per cycle

Interval The width of the basic cycle of the model will be determined by the action that will have the largest number of time units:

Repeat (nb of t per c) t(max) = Start + (Interval x (Repeat -1))

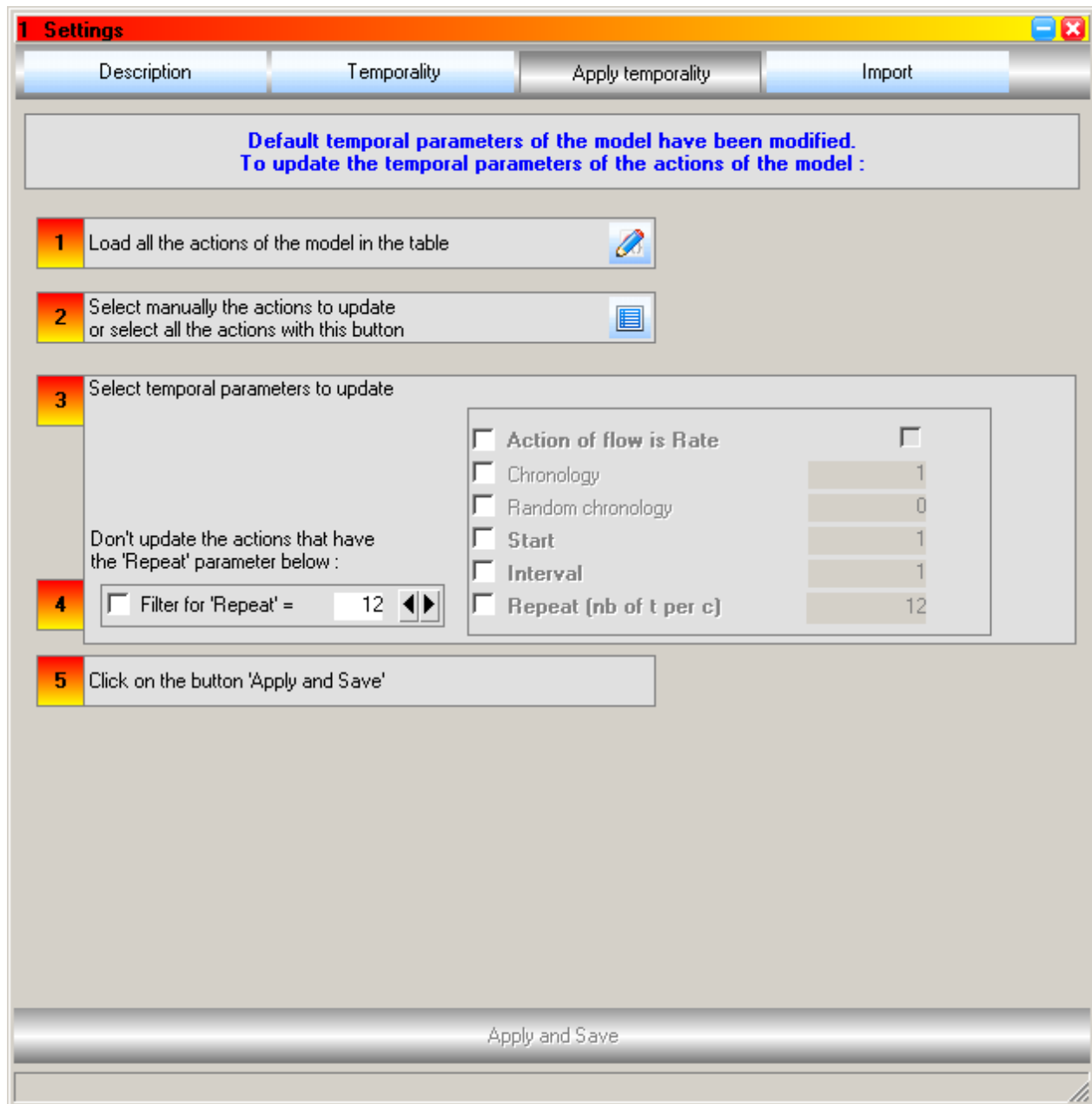
TimeTrue (=Time in True) = TimeVensim (=Time in Vensim) =

- Initialize the fields as they are required by the model
 - These default temporal parameters are used when creating a new action in a flow (see 'Manual Part 05 - Actions')

- ❑ You create and delete new labels for the cycle and time units with the blue icon + and -
- ❑ Click on the 'Save' button

3. Applying temporality

- ❑ Click on the 'Apply Temporality' button



- ❑ Follow the instruction
- ❑ Click on the 'Apply and Save' button

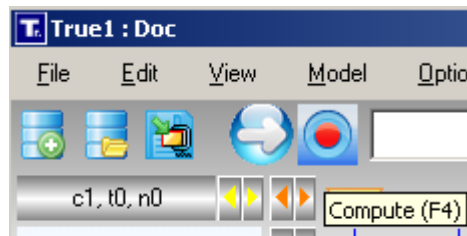
B) Manual Computing

Compute the model to calculate and memorize all the values of the variables for the asked period.
Alone enabled actions of enabled flows will be computed during this phase.
Any modification of stock or flow in the model requires a new compute.

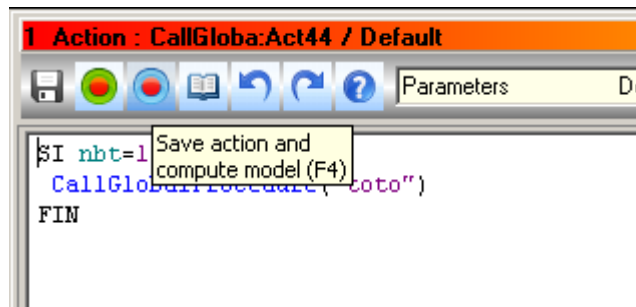
To compute the first cycle

- ❑ click on the 'Compute' blue button or :
 - ❑ press the F4 key or :
 - ❑ select 'Compute' option of the 'Model' menu or :
 - ❑ click on the 'Compute' button in the window of a procedure, see 'Manual Part 05 - Actions'
- Note:
- when compiling, the button is red
 - after compiling, the button is grey, to compute again press the F4 key
 - if the model is modified, the button is blue again and you can compute again the model

Compute button

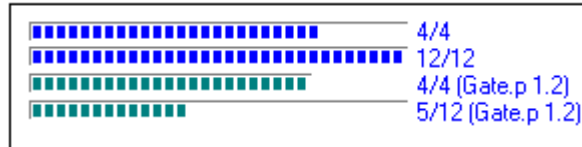


Compute menu in the procedure of one action



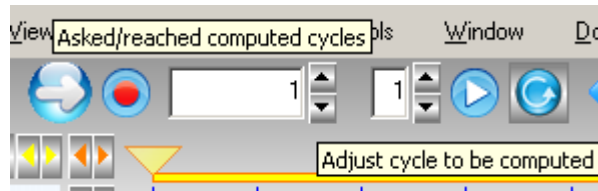
Computing progression bars are on the left side of the model

- ❑ the first bar : current cycle
- ❑ the second bar : time current unit
- ❑ the third bar : current cycle when retro-calculating, with number or gate and number of passage
- ❑ the fourth bar : current time unit when retro-calculating, with number or gate and number of passage



Computing the model for more cycles

- ❑ enter the number of cycle to compute or :
 - ❑ click up or down on the spin
 - ❑ If the number of asked cycles exceeds the last computed one, the blue button is enabled
- Note: the number of cycles is limited at 2 000 000 000. However this limit can be exceeded. Please consult us



Stopping the computation

From the 'Model' menu :

- ❑ select the 'Stop compute after current cycle' option or :
 - ❑ select the 'Stop compute after current time unit' option
- Note:
- To cancel the need to compute when the button is blue, select the 'Disable compute button' option
 - If the computing module is stopped, select the 'Restart compute module' option of the menu

C) Automatic computing

The computation automatically starts if the model must be computed when it starts displaying.

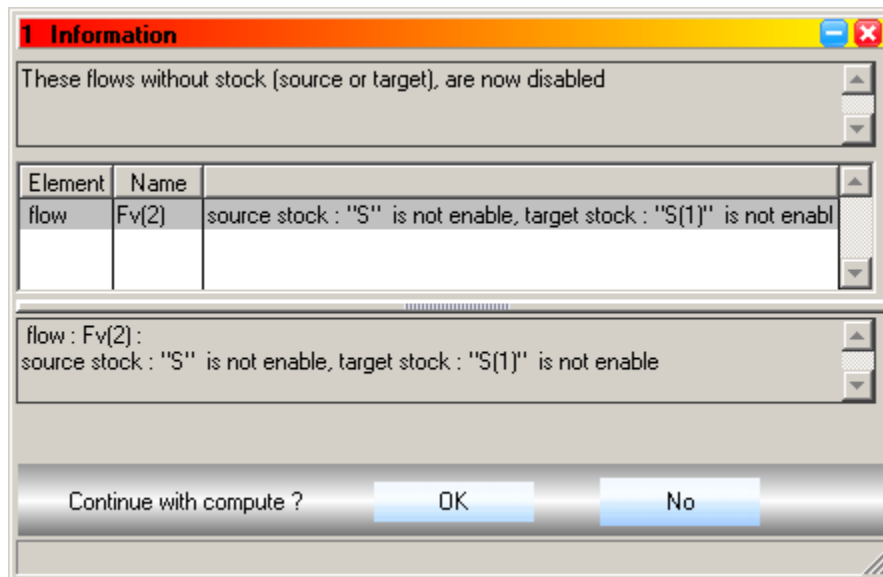
When playing, if the end of a cycle is reached and if the following cycle to be displayed is still not computed, this will be automatically done.

D) Error messages before computing

1. Messages while starting computing

While starting computing, if the enabled flows have no source or target stocks, these flows will automatically be disabled, and the 'Information' window will allow to or not continue the computation

'Information' window

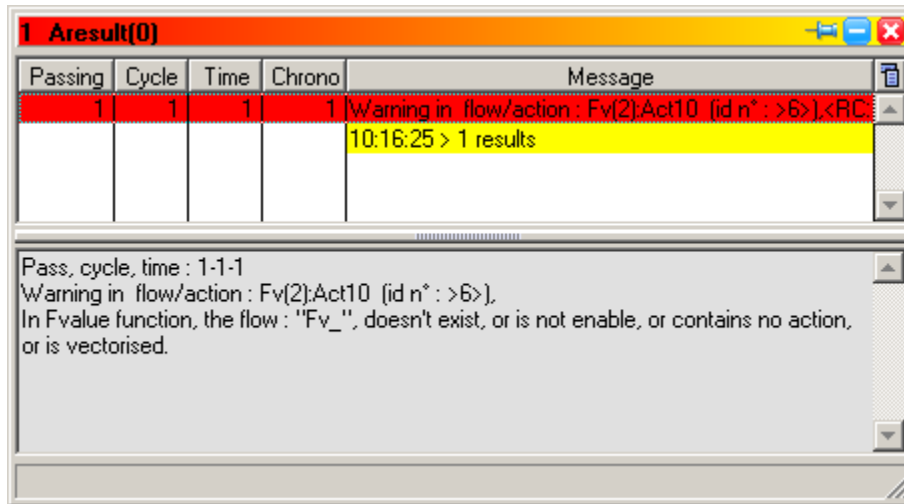


- Note: in this window, the flow 'Fv(2)' is disabled because its source and target stocks have been disabled or deleted

2. Errors when computing

When starting computing, the errors contained within actions will be displayed in the 'Results' window

'Result' window



- Note: for selecting the flow with the error within the mdoel, select the line, for editing the action with the error, double-click on the line

E) Remote Compute

1. Model Menu: 'Remote Compute' option

If enable, this option allows to start compute if the 'Remote.ini' file is in the export directory

'Remote.ini' file description:

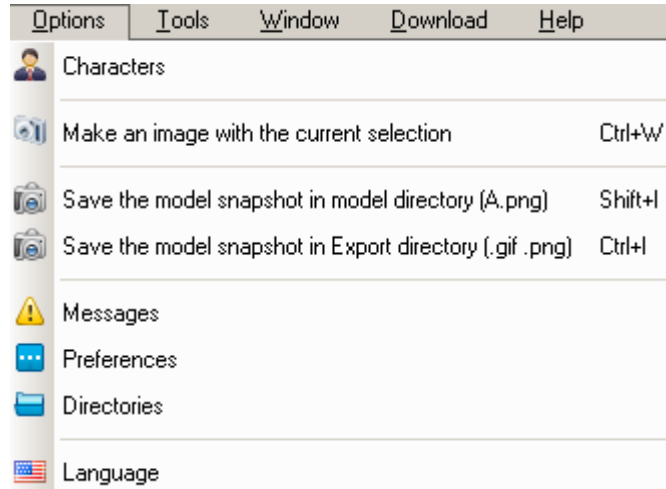
```
[Remote]
LastCycle=100
ReturnFile=c:\xxxx.txt
```

- ❑ lastcycle : computing will stop at the end of this cycle
- ❑ ReturnFile : this file will be written at the end of computing

V - 'OPTIONS' MENU

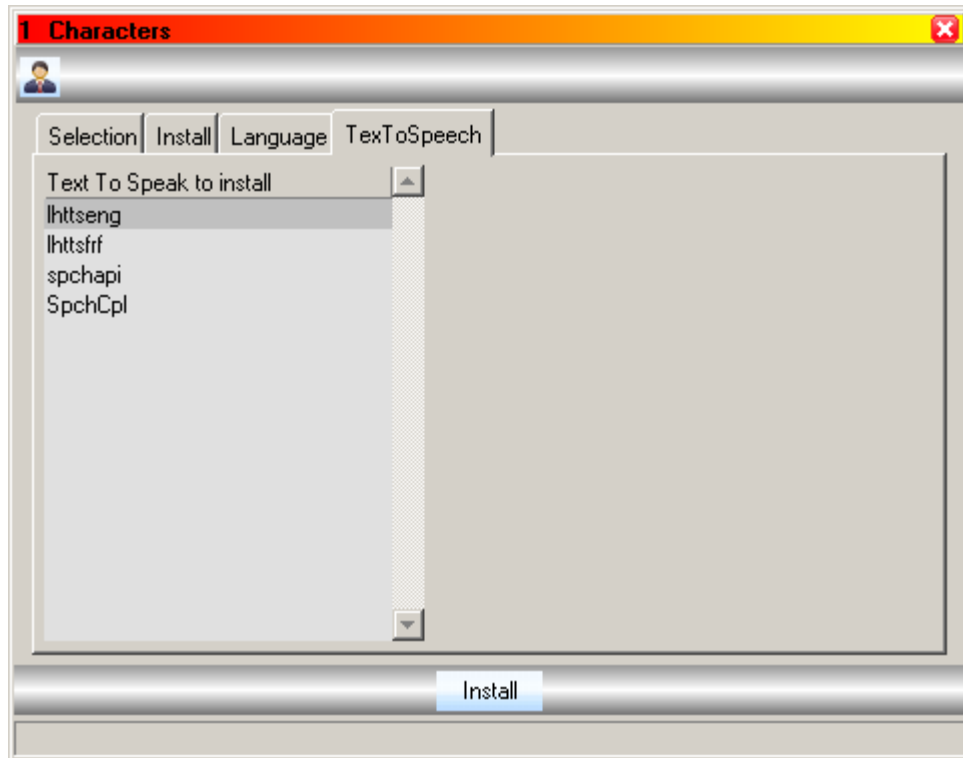
- ❑ Select the 'Options' option

'Options' menu



1. Characters

'Characters' window for installing the characters

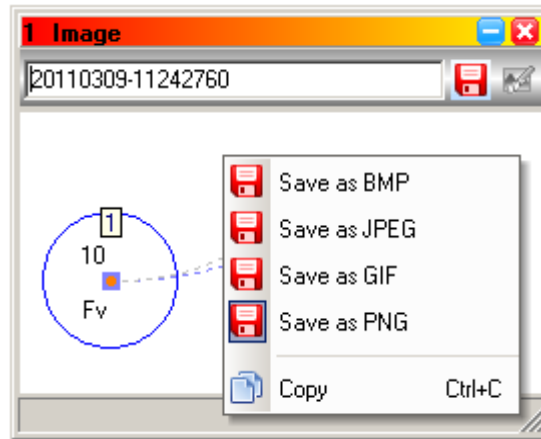


- ❑ for the 'Install', 'Language' and 'TextToSpeech' plans :
- ❑ select all the lines of the tables
- ❑ click on the 'Install' button

2. Making an image with the current selection

- ❑ by using the mouse, select a part of the model
- ❑ then select the 'Make image with current selection' option from the menu or :
- ❑ press the Ctrl+W keys

The 'Image' window displays a hard-copy of the selected part of the model



- ❑ enter a name of the image
- ❑ click on the 'Save' button
- ❑ the image is saved in the 'Export' directory of the model
- ❑ the image is copied on the memory
- ❑ for opening and editing the image with the default software (MsPaint), click on the 'Edit' button

3. Save a snapshot of the model in the model directory

To save a snapshot of the model (A.gif) in the directory of the model :

- ❑ select this option or :
- ❑ press the Shift+I keys

4. Save a snapshot of the model in the Export directory

To save a snapshot of the model in the 'Export' directory of the model :

- ❑ select this option or :
- ❑ press the Ctrl+I keys

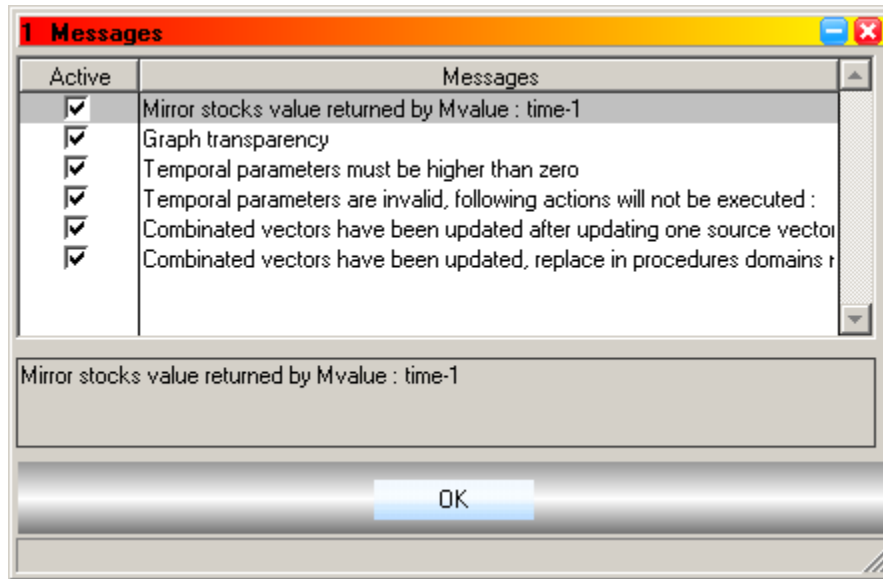
File names examples:

20140226_11333785_01.gif (date + time)
20140226_11333785_01.png

5. Messages

- Enabling or disabling of the messages

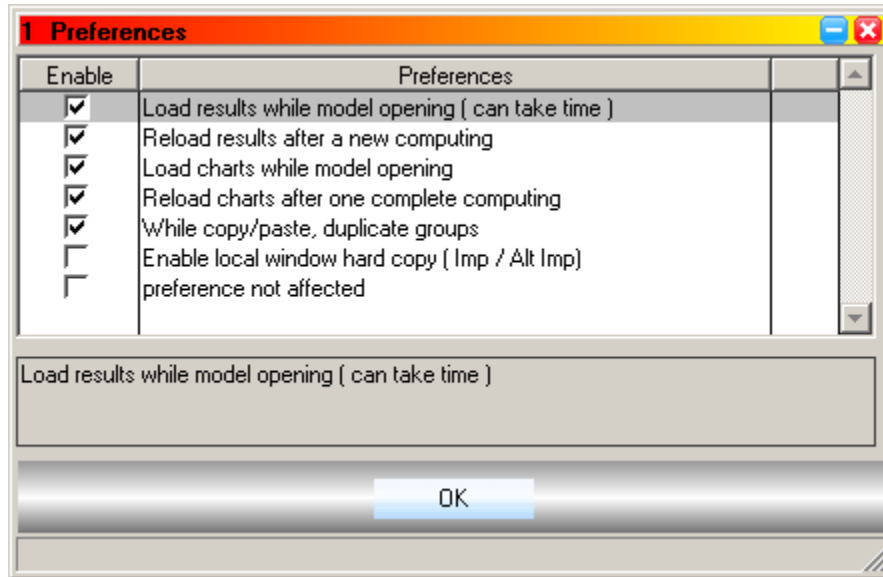
'Messages' window



6. Preferences

- Enabling or disabling of the preferences

'Preferences' window

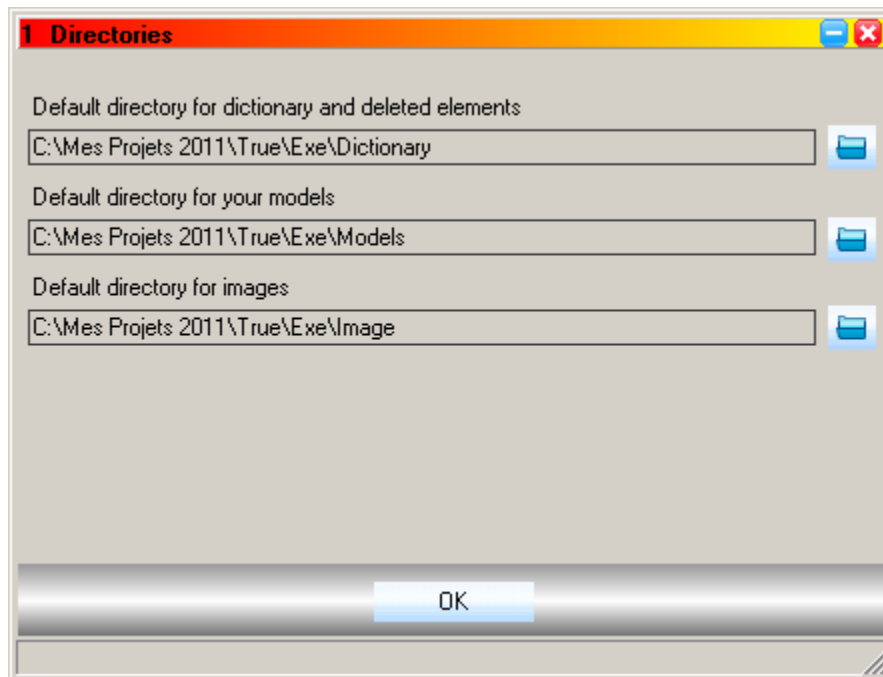


- 'Loading results while the model opening (it can take time)'
Loading or not of the messages written by the [Aresult\(\)](#) function within the 'Results' windows
- 'Loading results after a new computation'
Loading or not of the messages written by the [Aresult\(\)](#) function within the 'Results' windows after a new computation
- 'Load charts while model opening'
Loading or not of the charts, it can take time
- 'Reload charts after one complete computation'
Loading or not of the charts after a new complete computation
- 'While copying/pasting, duplicate groups'
Duplicating or not a group while duplicating their elements
- 'Enable local window hard-copy (key Imp / Alt Imp)'
Enabling or not the hard-copy of the current window within the window 'Image' while pressing the 'Impr. system' or 'Alt+Impr. System' keys

7. Directories

- Select the default directories

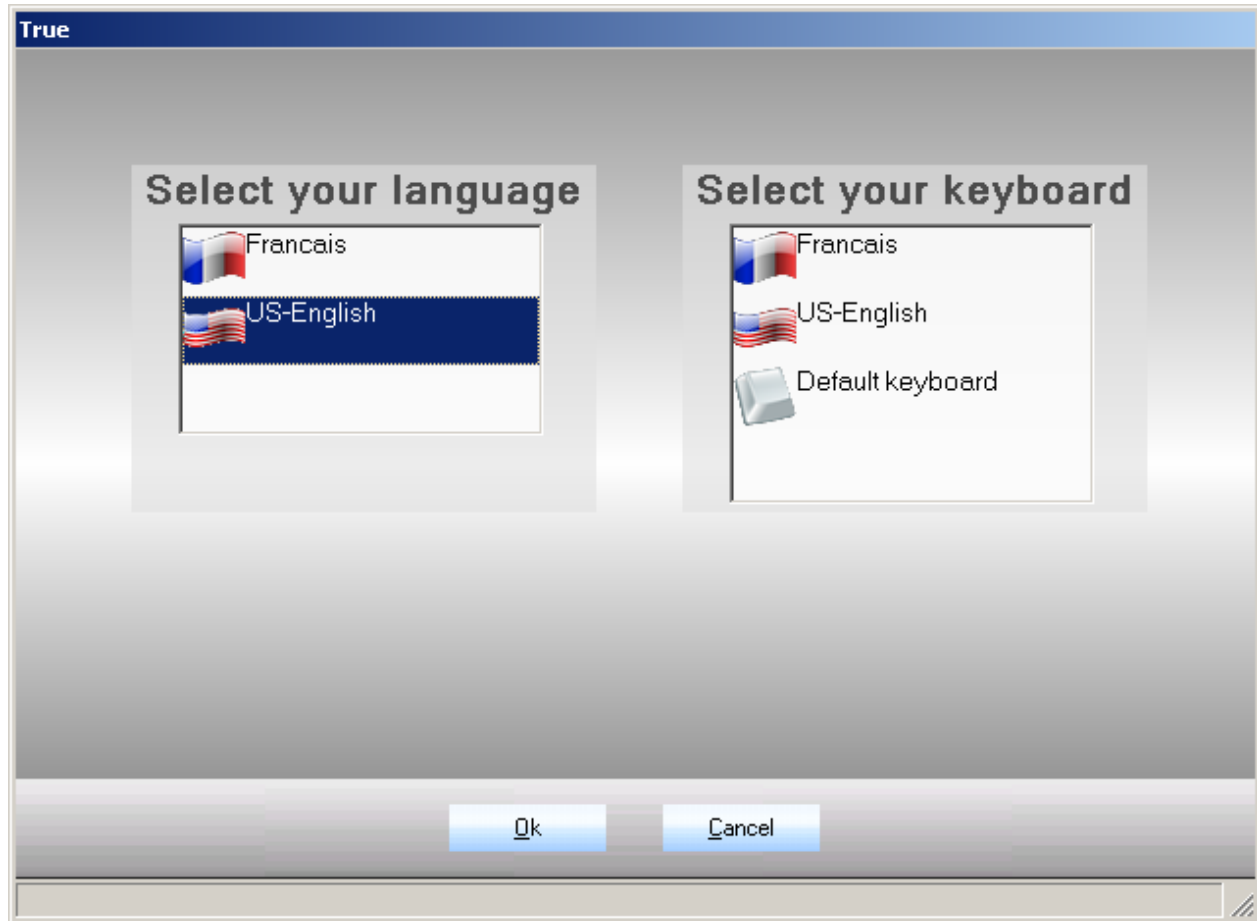
'Directories' window



8. 'Language' option

- choose the language
- choose the keyboard
- click on the Ok button
- restart the software

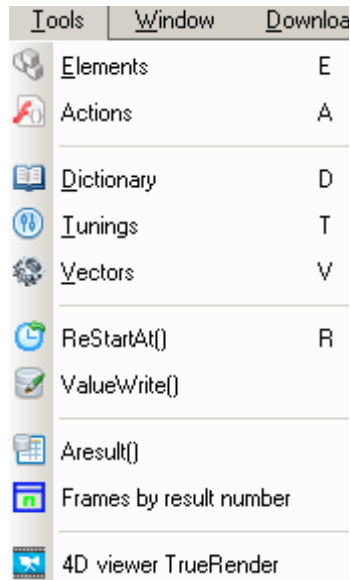
Window for selecting the language



VI - TOOLS MENU

- ❑ Select the 'Tools' option

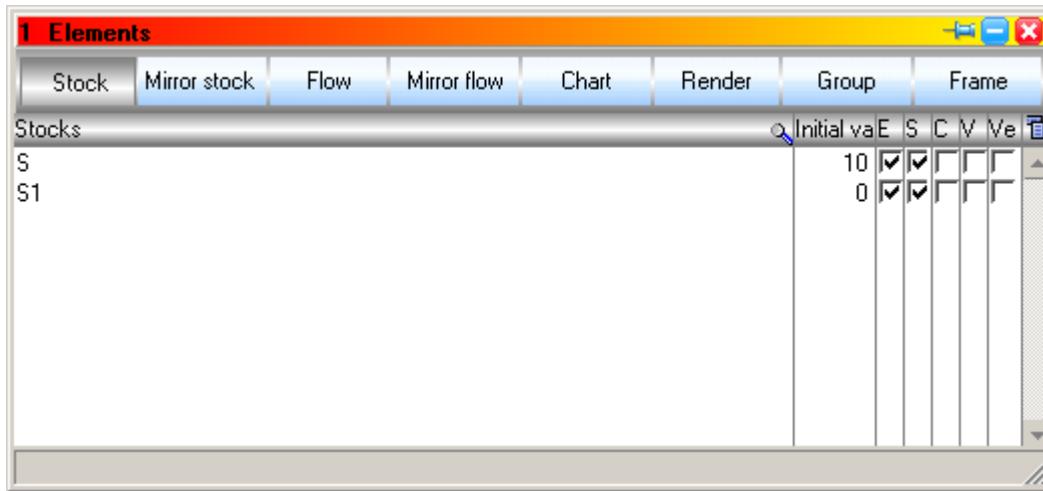
'Tools' menu



1. Elements

- Display the 'Elements' window

Elements window



The screenshot shows a window titled "1 Elements" with a yellow title bar. Below the title bar is a menu bar with tabs: Stock, Mirror stock, Flow, Mirror flow, Chart, Render, Group, and Frame. The "Stocks" tab is selected. Below the menu bar is a table with the following columns: Initial value, E, S, C, V, and Ve. The table contains two rows of data:

	Initial value	E	S	C	V	Ve
S	10	✓	✓	✓	✓	✓
S1	0	✓	✓	✓	✓	✓

This window lists the elements of the model

- Stocks
- Mirror stocks
- Flows
- Mirror flows
- Charts
- Renders
- Groups
- Frames

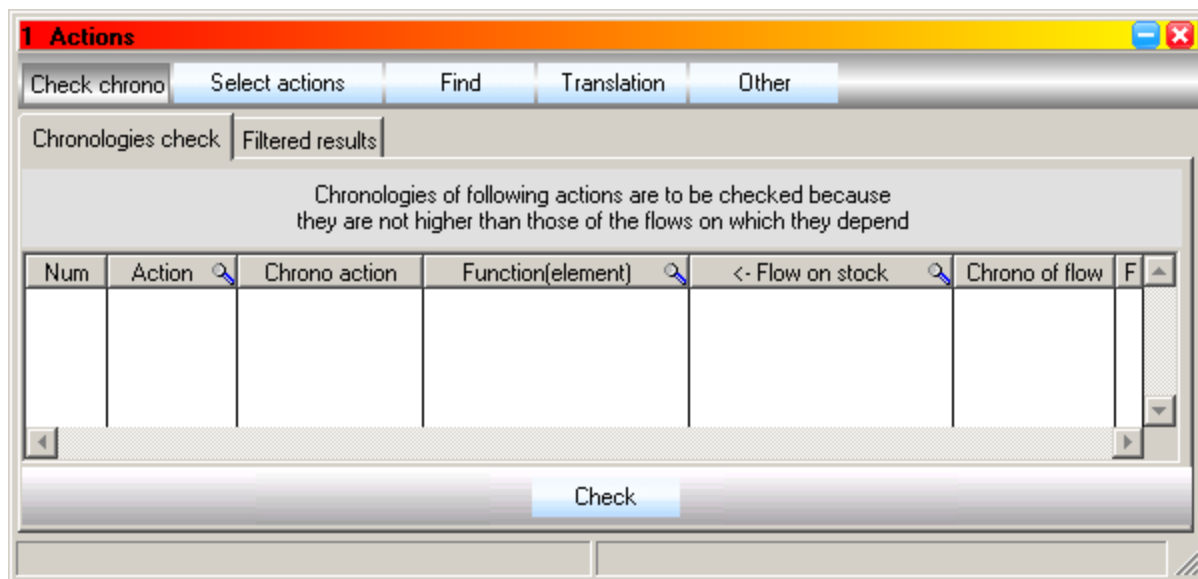
For more information see the 'Manual Part 03 - Elements'

2. Actions

The 'Actions' window allows to :

- find and replace codes within the actions
- verify chronologies
- initialize the name of the actions
- translate the codes in French or English

'Actions' window



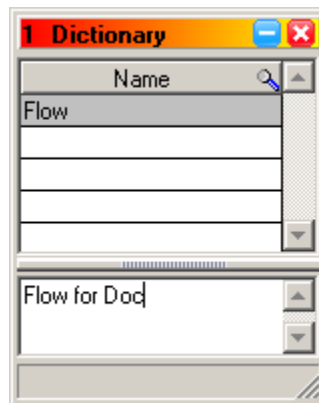
For more information see the 'Manual Part 05 - Actions'

3. Dictionary

The 'Dictionary' window allows :

- ❑ to store a part of the model for its subsequent reuse in the same or another model

'Dictionary' window



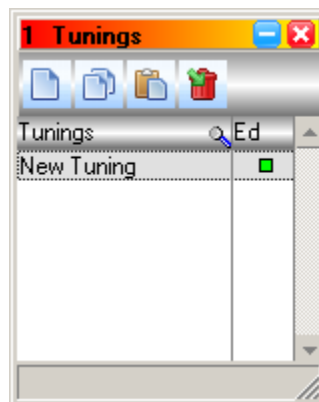
For more information see the 'Manual Part 03 - Elements'

4. Tunings

The 'Tunings' window lists the possible Tunings of the model

- ❑ The 'Tunings' window contains tunings
Tunings allow to set the initial values of the stocks

'Tunings' window

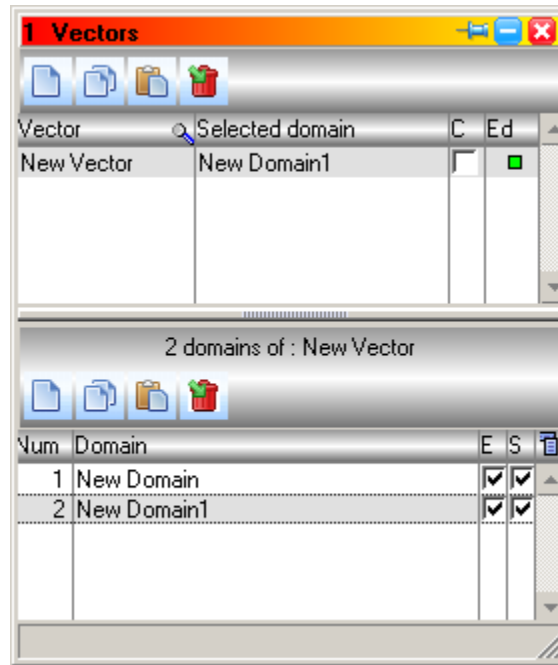


For more information see the 'Manual Part 04 - Tunings'

5. Vectors

The 'Vectors' window lists the vectors and their domains

['Vectors' window](#)

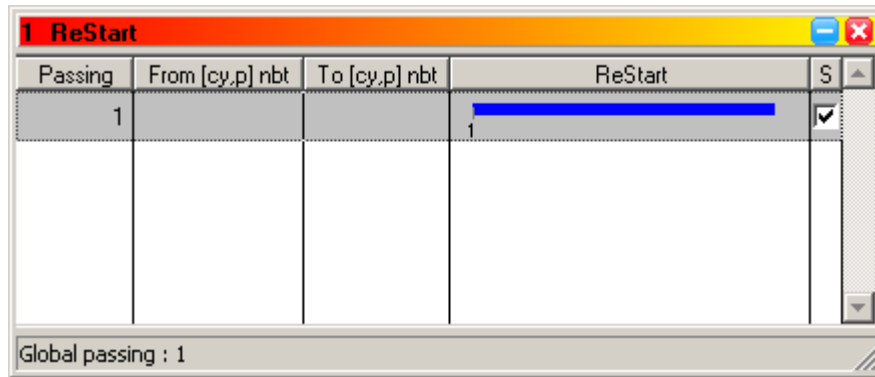


For more information see the 'Manual Part 06 - Vectorization'

6. ReStartAt()

The 'ReStart' window lists the passages generated by the [ReStartAt\(\)](#) function

['ReStart' window](#)



Passing	From [cy.p] nbt	To [cy.p] nbt	ReStart	S
1			1	<input checked="" type="checkbox"/>

Global passing : 1

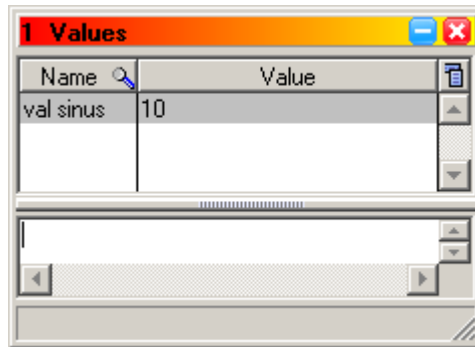
For more information see the 'Manual Part 05 – Actions' :

- [ReStartAt\(\)](#) function
- 'Selection of passages' chapter of this current manual

7. ValueWrite()

The 'Values' window lists the variables and their values generated and stored by the [ValueWrite\(\)](#) function

['Values' window](#)



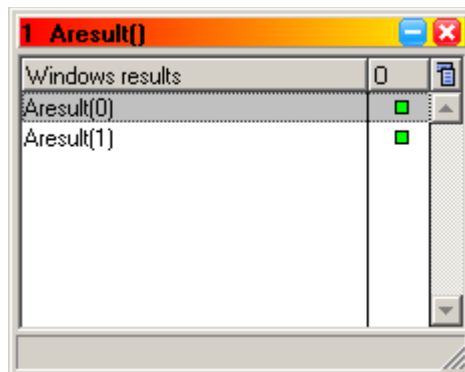
For more information see the 'Manual Part 05 - Actions', [ValueWrite\(\)](#) function

8. Aresult()

The Aresult() window lists the 'Results(x)' windows

- the Aresult(x) windows list the messages written by the [Aresult\(\)](#) function

['Aresult\(\)' window](#)



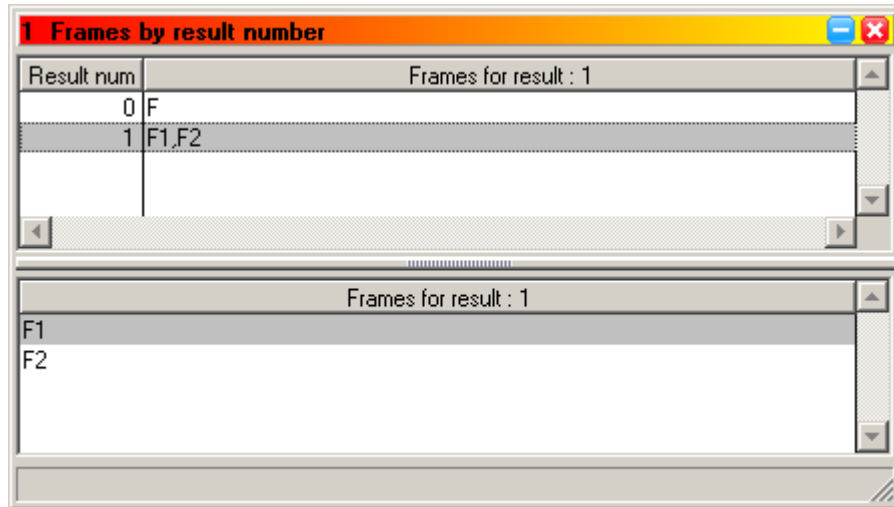
For more information see the 'Manual Part 05 - Actions', [Aresult\(\)](#) function

9. Frame by result number

The 'Frames by result number' window lists the frames defined to display messages written by the [Aresult\(\)](#) function

'Frame by result number' window

- Select a line to list the frames associated to the resulted number



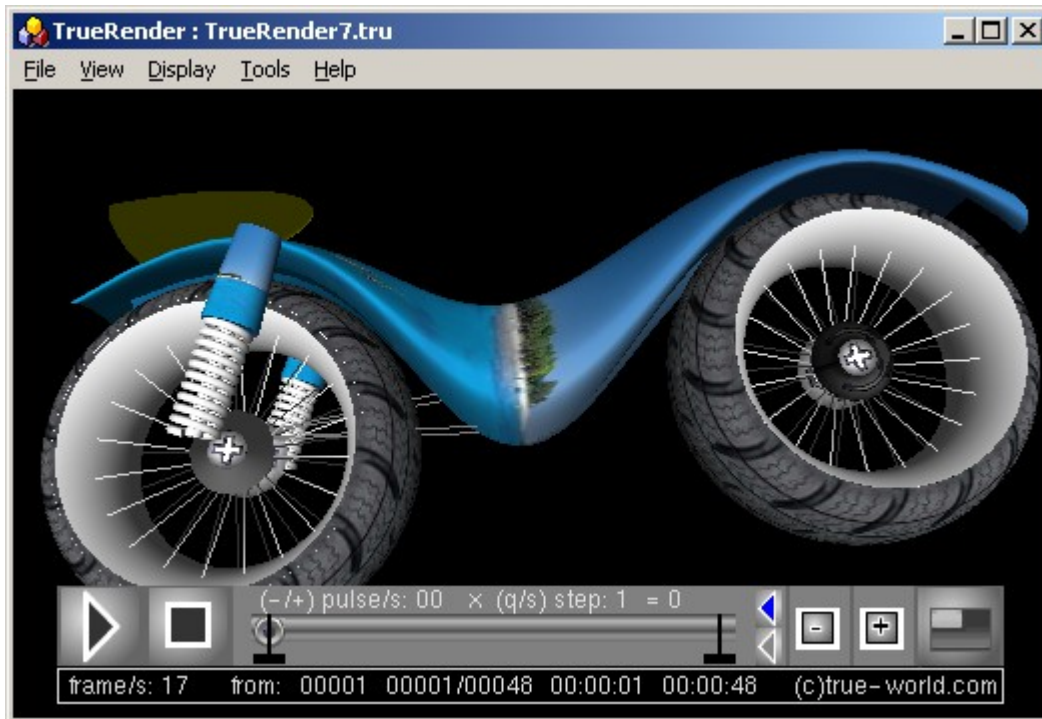
For more information see the 'Manual Part 05 - Actions', [Aresult\(\)](#) function

10. 4D Viewer TrueRender

The external program TrueRender displays 4D scenes created by the 4D modeler.

TrueRender

- ❑ press the 0 to 9 key to display default scenes TrueRender0.tru to TrueRender9.tru
- ❑ press twice the F1 key to display help1 and help2
- ❑ press the space key to start animation

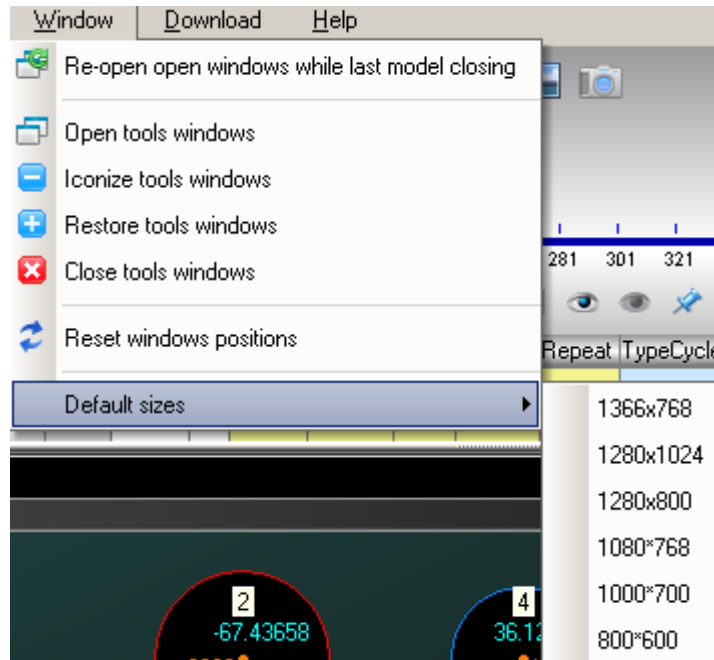


For more information see the 'Manual Part 09 - Renders'

VII - WINDOW MENU

- ❑ Select the 'Window' option

'Window' menu



1. Reopening the windows while closing the model

- ❑ Select this option to reload the opened windows when closing the model.

2. Opening all tools windows

- ❑ Selecting this option to open all the child windows



3. Iconizing, restoring, closing all the tools

- ❑ Select this option to iconize, restore and close all the tools

4. Reset windows positions

- ❑ Select this option to reset the position of all the windows, tables, etc.

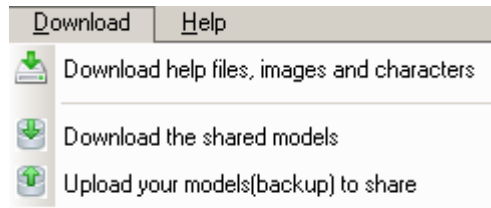
5. Default size

- ❑ Select a size for the main window

VIII - DOWNLOAD MENU

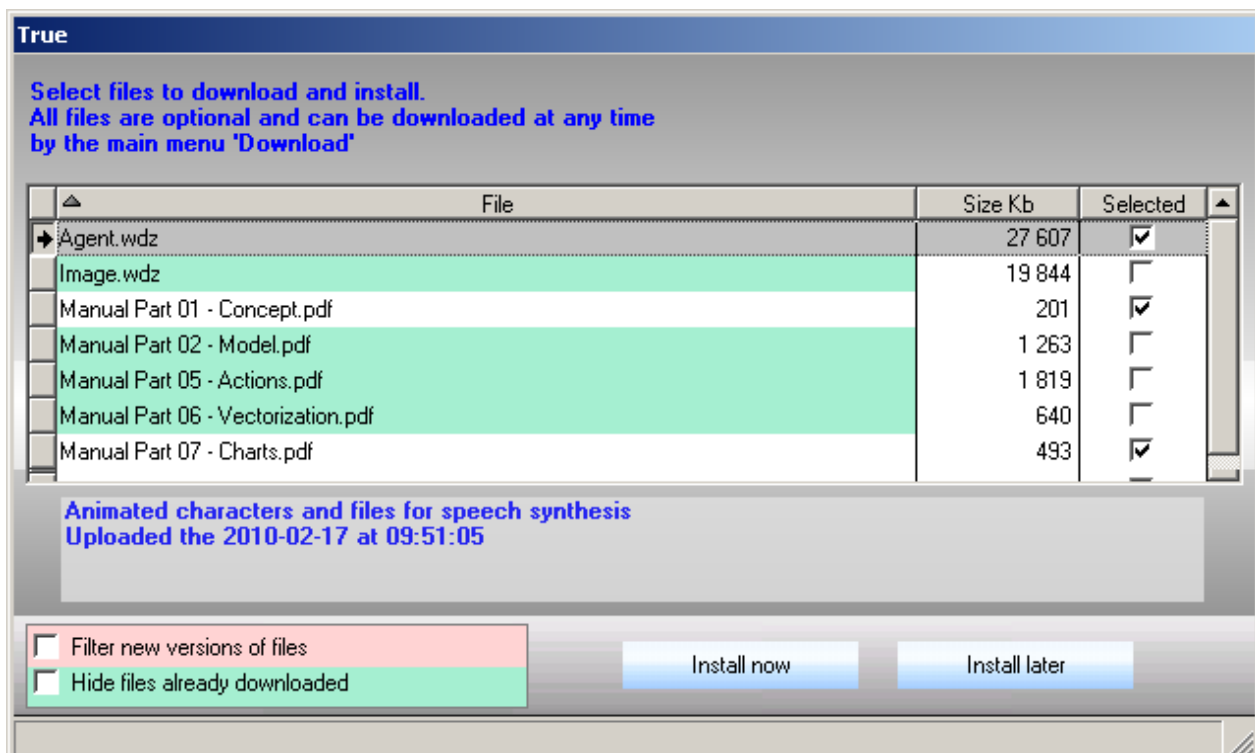
- ❑ Select the 'Download' option

'Download' menu



1. Download help files, images and characters

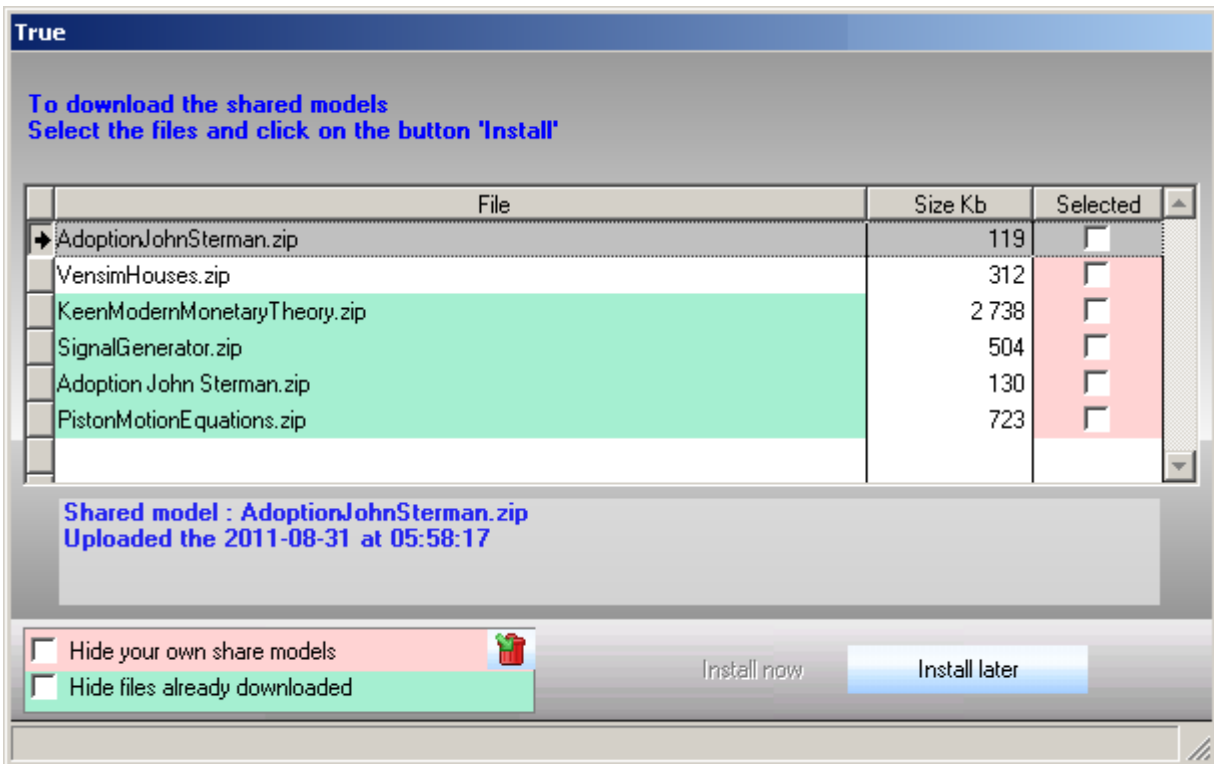
- ❑ Select files to download and click on the 'Install now' button



- ❑ A line is green if the file has already been downloaded
- ❑ A line is red if a new version of the already downloaded file exists on the server
- ❑ To filter only the new versions check the red box
- ❑ To hide the already downloaded files, check the green box

2. Downloading the shared models

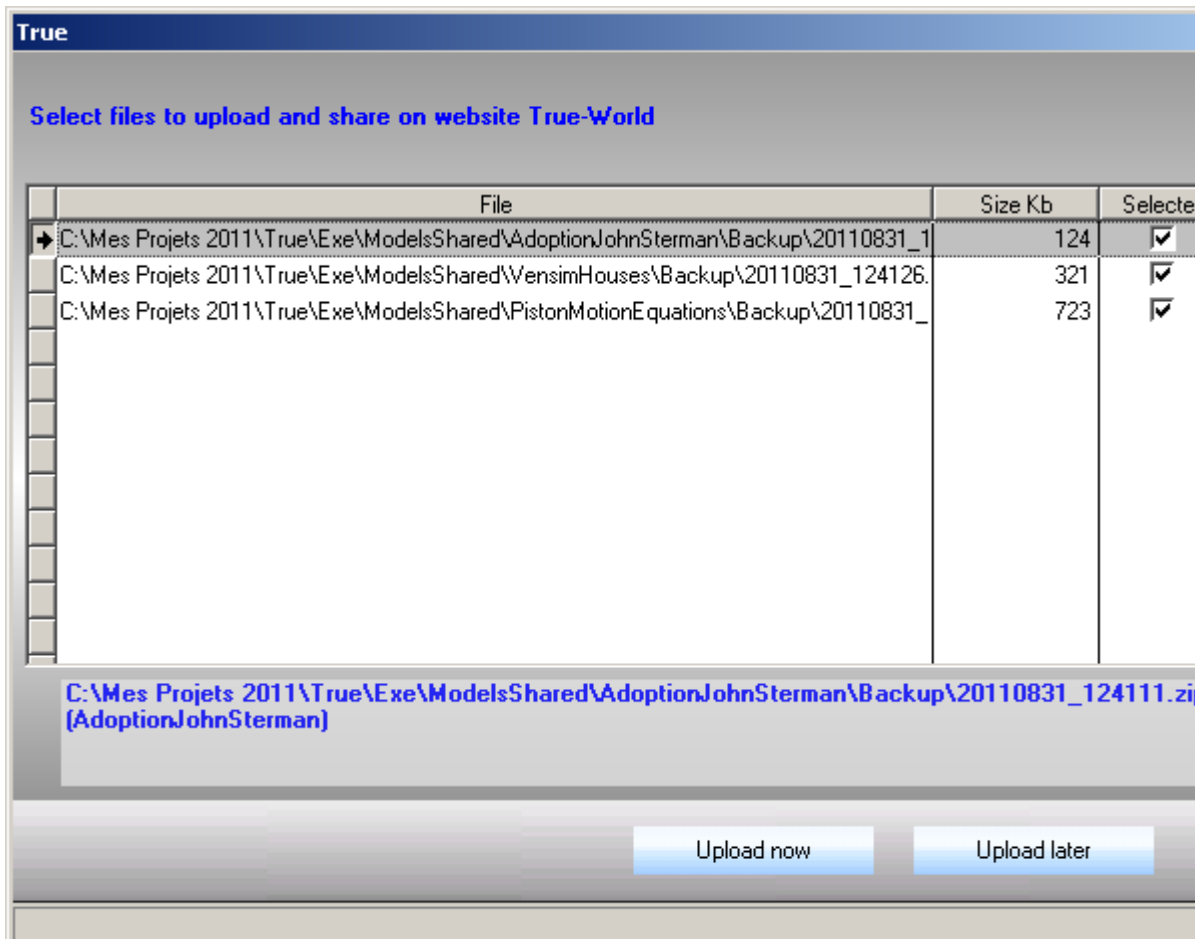
- ❑ Select files to download and click on the 'Install now' button



- ❑ A line is green if the file has already been downloaded
- ❑ The 'Selected' column is red if the model that is belong to is uploaded by you
- ❑ To hide your shared model, check the red box
- ❑ To hide the already downloaded files, check the green box
- ❑ To delete your own models, click on the 'Delete' button

3. Uploading your models to share (backups of the models)

- ❑ Select the backup of the model to upload on True server and click on 'Upload now' button

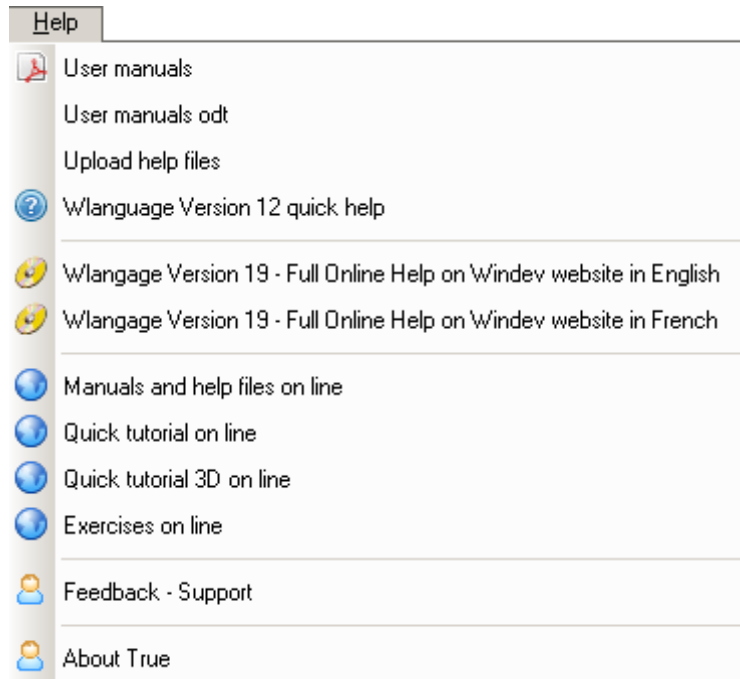


- ❑ Select the files to download and click on the 'Install now' button

IX - HELP MENU

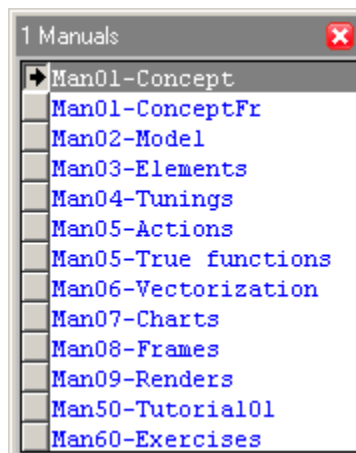
- ❑ Select the 'Help' option

'Help' menu



1. User's manuals

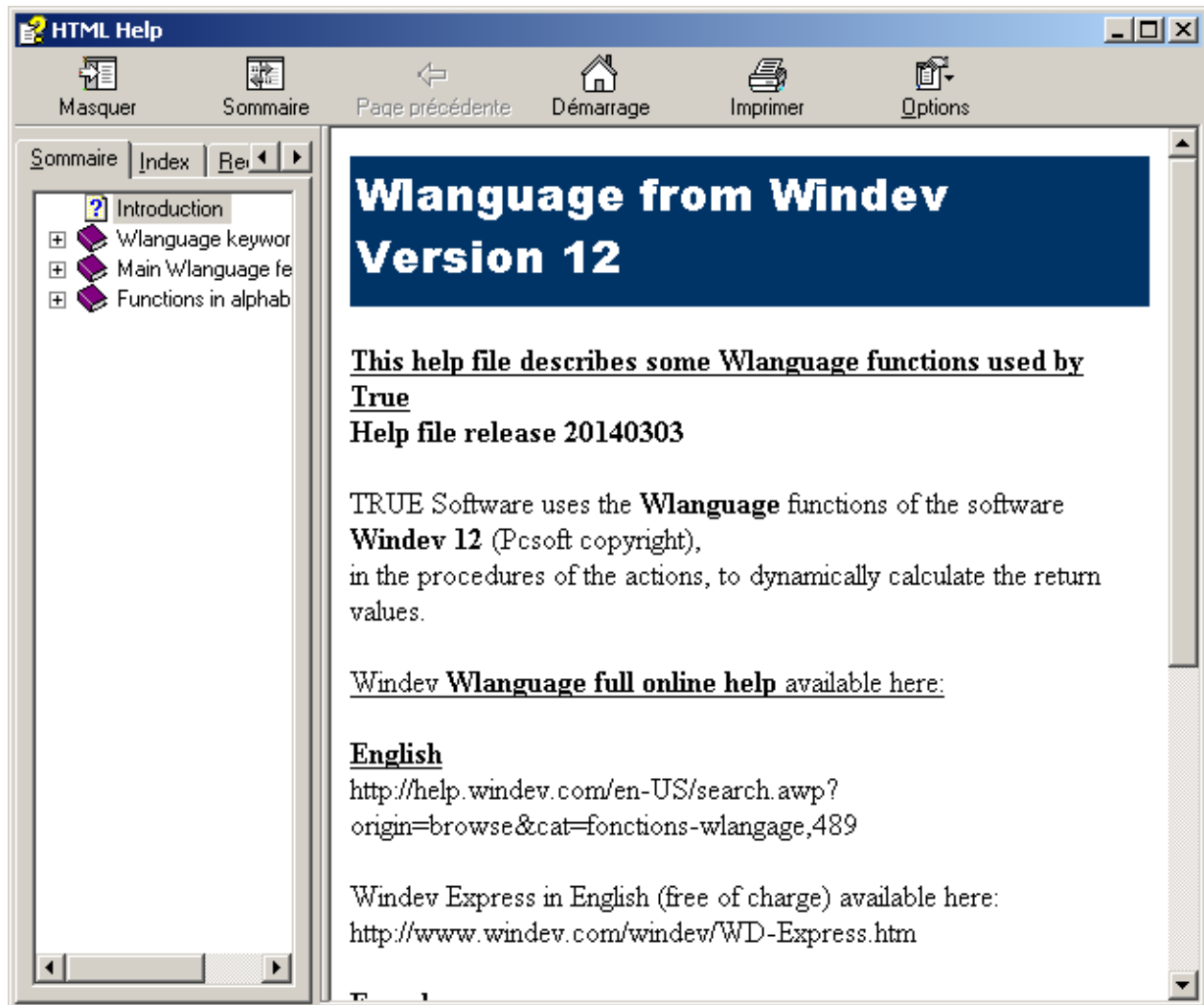
- ❑ Lists the user's manuals



- ❑ click on one manual to open it with the pdf default application

2. Wlanguage Version 12 quick help

- Displays the Wlanguage help, used within the code of the fows action procedures

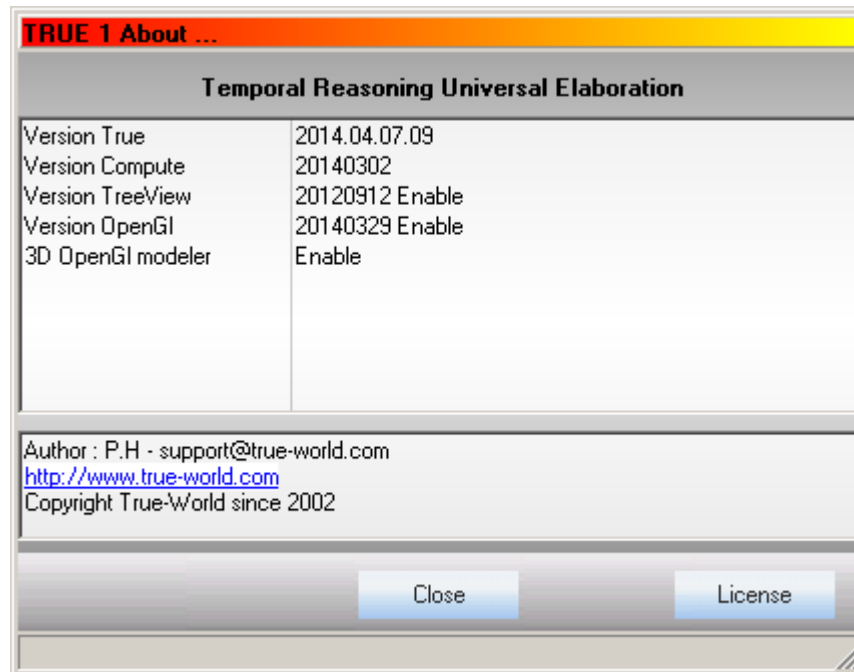


3. Wlangage, manuals, tutorial, exercises ... On line options

- Display on line help files

4. About True

'About' windows

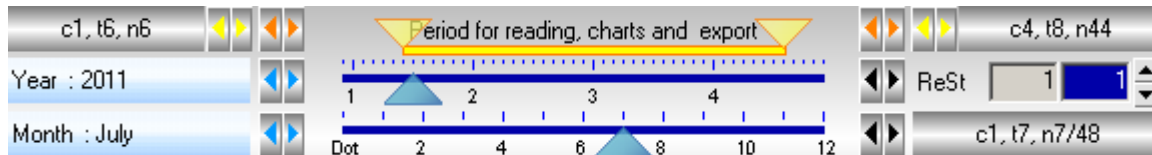


X - READING A MODEL

A) Period of reading, time scales

A reading period is delimited by a beginning and an ending cycle, as well as a beginning and an ending time unit.

Time scales



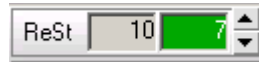
When computation is completed, the following scales are initialized :

- ❑ the yellow scale : to choose the period of charts and exporting data reading,
 - to choose the reading period, use the yellow and orange spins located both on the left and the right side, or the yellow cursors. These allow to one cycle or time unit forward or backward
 - the yellow fields located both on the left and the right side indicate the cycle, time unit, and number of time unit at the beginning and of the end of the reading period
- ❑ the blue scale in the middle : the scale of cycles
 - to choose the current cycle use the blue spin located to the left or the blue cursor
 - the black spin located to the right allows to dilate or to shrink the scales of cycles
 - the blue field located to the left indicates the date corresponding to the current cycle
 - fields located to the right allow choosing the number of passage (see the following chapter)
- ❑ the blue scale of the bottom : the scale of time units
 - to choose the current time unit use the blue spin located to the left or the blue cursor
 - the black spin located to the right allows to dilate or to shrink the scale of time units
 - the blue field located to the left indicates the date corresponding to the current time unit
 - the blue field located to the right indicate the current cycle, time unit, number of time unit and the total number of time units

B) Selection of the passages (ReStartAt)

1. Fields for passages (ReStartAt)

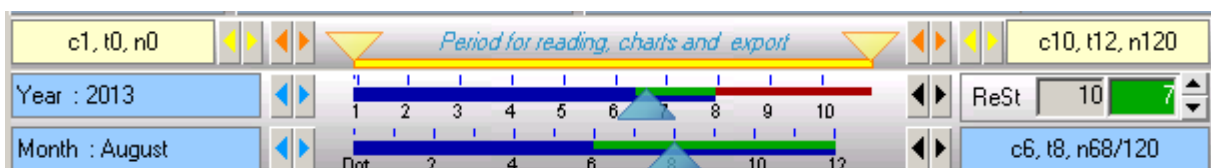
Fields to select the current passage



- ❑ while computing the model, the first field ' ReSt ' (~ReStartAt) displays the number of passages generated by the **ReStartAt()** retro-calculation function
- ❑ the second green field displays the current passage
- ❑ the spin located to the right allow to select the current passage
- Note: values displayed within the model are function of the current selected passage

2. Time scales according to the current passage

Scales of cycles and time units according to the current passage

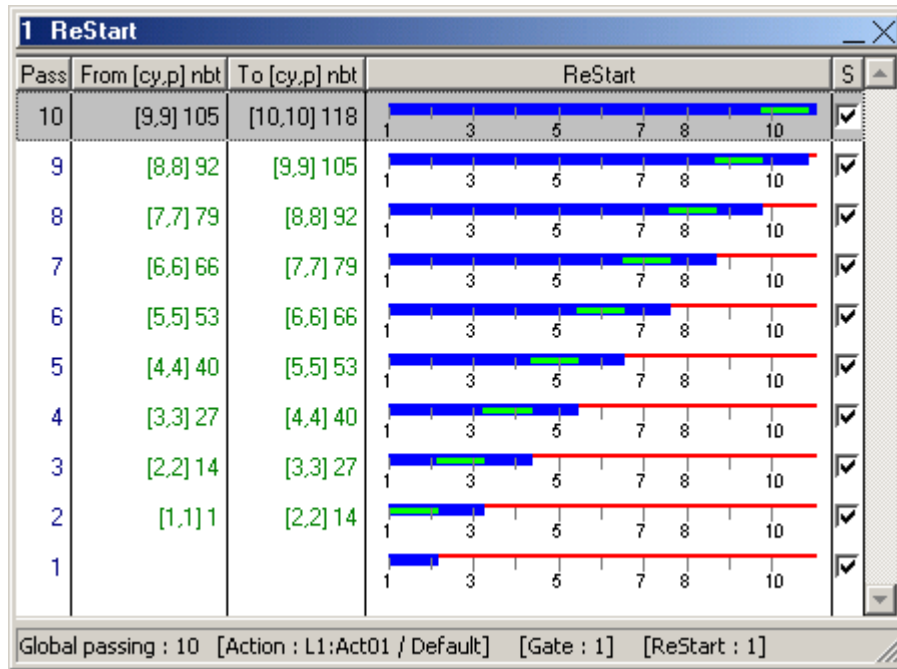


- the scales have three bars indicating the position of the selected passage of the computed period :
 - the blue zone indicates the computed period of the current passage
 - the red zone indicates the not computed period of the current passage
 - the green zone indicate the recomputed period (retro-calculation) of the current passage

3. 'ReStart' window

- ❑ Select the 'ReStartAt()' option of the 'Tools' menu
- ❑ This window displays the passages generated by the **ReStartAt()** retro-calculation function while computing the model

'ReStart' window



The columns :

- ❑ 'Passage' : the passage number
- ❑ 'From [cy,p] nbt' : the cycle, time unit and the number of time units corresponding to the beginning of the passage
- ❑ 'To [cy,p] nbt' : the cycle, time unit and the number of time units corresponding to the end of the passage
- ❑ 'ReStart' : the graphical presentation of the passage position of the computed period :
 - the blue zone indicates the computed period of the passage
 - the red zone indicates the uncomputed period of the passage
 - the green zone indicates the recomputed period of the passage
- ❑ 'S' : select or not the passage concerned by charts and exporting data elements
- ❑ The message bar displays the flow and the action that call the **ReStartAt()** function

C) Displaying

While displaying, all the values of the computed elements can be displayed, for all the time units of the computing period.

1. Buttons

Spin speed, 'Play, Loop, previous and next time, previous and next cycle' buttons



- ❑ Speed spin : displayed speed is equal to : $1/\text{spin value}$
 - ❑ 'Start/Stop' (F5) button : it starts or stops displaying
 - ❑ 'Loop' (F6) button : continuous displaying (looping)
 - ❑ Previous time button (or left arrow) : it displays the the previous time of the model
 - ❑ Next time button (or right arrow) : it displays the following time of the model
 - ❑ Previous cycle button (or up arrow) : it displays the the previous cycle of the model
 - ❑ Next cycle button (or down arrow) : it displays the following cycle of the model
- Note : for cycle = 1 and time unit = 0 :
- displayed stocks values are exactly their initial values
 - values of mirror stocks are the sum of the initial values of the source stocks, they are displayed only if the model is computed
- Note : the passage from a cycle to the next one is automatically done when displaying

XI - EXPORT DATA

A) Exporting values of one or more elements

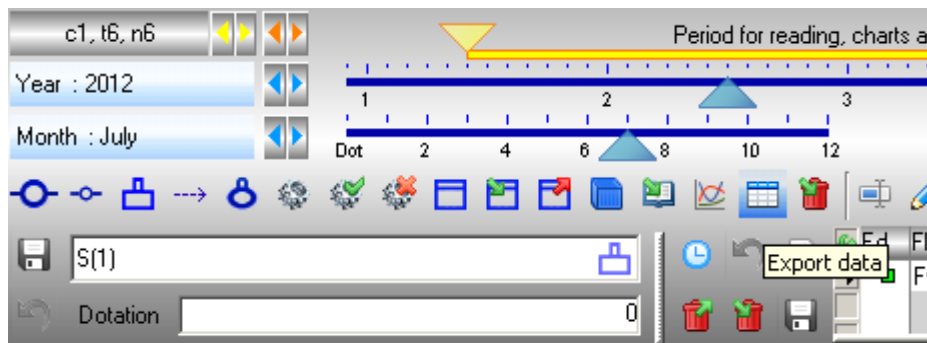
1. Selecting the period and the passages of export

- ❑ Select the displayed period with yellow cursors : see the previous chapter 'Read a model'
- ❑ Select one or more passages with 'ReStart' spin : see the previous chapter 'Read a model'

2. Selecting the element

- ❑ Select on element : stock, mirror stock, flow or chart
- ❑ Select the 'Export values' option of the contextual menu of the element or :
- ❑ Select many elements
- ❑ Select the 'Export value' option of the popup menu of the selection or :
- ❑ Click on the 'Export data' button of the toolbar
- ❑ Click on an element or select several elements and click on the selection

'Export data' button of the 'Tools' tool bar



3. 'Export values' window

'Export values' window

Num	Year	Month	Customer P9	Turnover P9	Mirror P9	Turnover calculus P9
1	1	1	-4,311349	4,311349	0,00	5,38918
2	1	2	-8,562259	8,562259	0,00	6,39147
3	1	3	-12,353101	12,353101	0,00	6,87911
4	1	4	-15,25416	15,25416	0,00	6,71458
5	1	5	-16,851829	16,851829	0,00	5,93537
6	1	6	-17,3	17,3	0,00	4,75291
7	1	7	-16,8	16,8	0,00	3,5028
8	1	8	-15,3	15,3	0,00	2,55578
9	1	9	-14,0	14,0	0,00	2,21803
10	1	10	-13,3	13,3	0,00	2,63996
11	1	11	-13,7	13,7	0,00	3,76808
12	1	12	-15,259333	15,259333	0,00	5,35020

Columns

- ❑ 'Num' : line number
- ❑ 'Year' : cycles
- ❑ 'Month' : time unit
 - the names of the cycle and time columns are function of the date setting (see the chapter 'Settings')
- ❑ Other columns : the names of the elements followed by the number of the passage, default : P1

To sort a column :

- ❑ Click on the title of the column

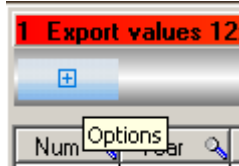
To move columns :

- ❑ drag-an-drop a column on other one

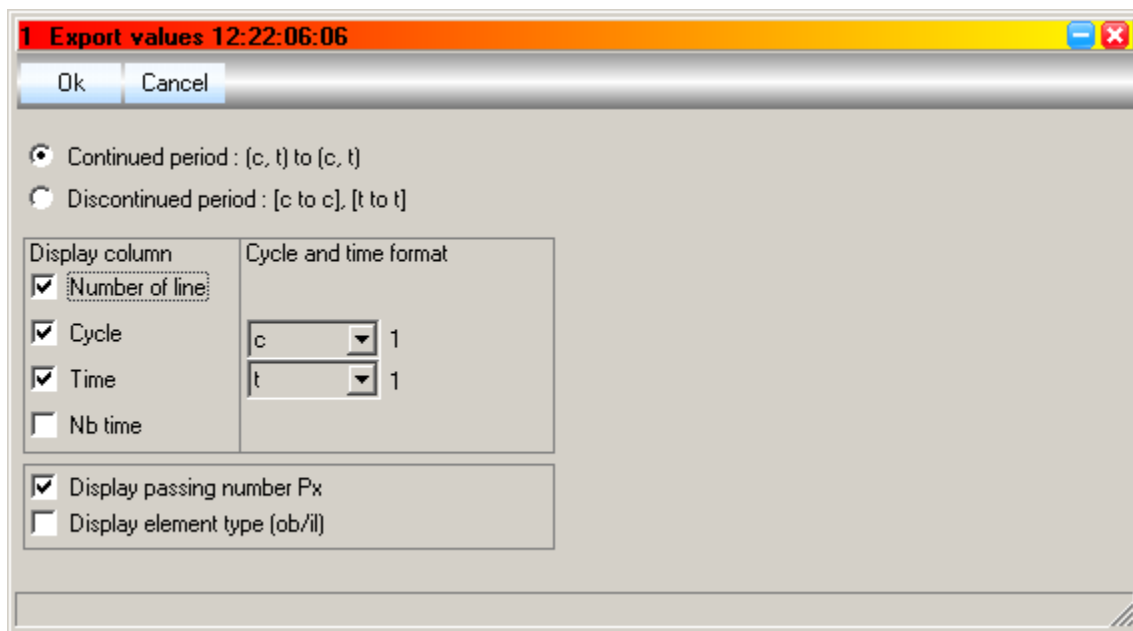
Export setting

- ❑ Click on the 'Options' button

'Options' button



'Export setting' plan

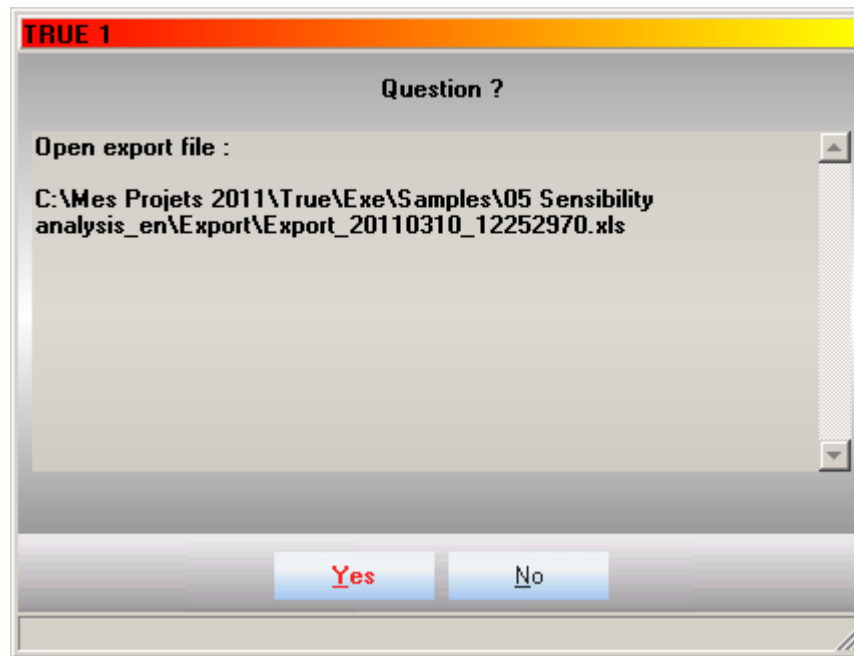


- ❑ Select the type of period :
 - Continuous period (see the chapter 'Display a model')
 - Discontinuous period
- ❑ Check the columns to be exported
- ❑ Select the format of the cycle/time columns titles
- ❑ Check the boxes to either display or not the number of the element passage
- ❑ Check the boxes to either add or not a suffix in the name of the element (stock or flow)

4. Exporting

- ❑ Select the lines to export
- ❑ Right-click to display the popup menu
- ❑ Select an 'Export to ...' option
- ❑ Answer the question within the 'Open export file' window

'Open the export file' window



- ❑ The exported file is created in the 'Export' directory of the model
- ❑ You can explore this directory with File menu 'Directory of the model' option
- ❑ Example of exported data :

XML exported file displayed in Internet Explorer

T_DATA1					
Num	Year_	Month_	O_P10	A_P10	B_P10
3	1	2	2.366025	-2.366025	1.366025
4	1	3	3.866025	-3.866025	1.5
5	1	4	5.23205	-5.23205	1.366025