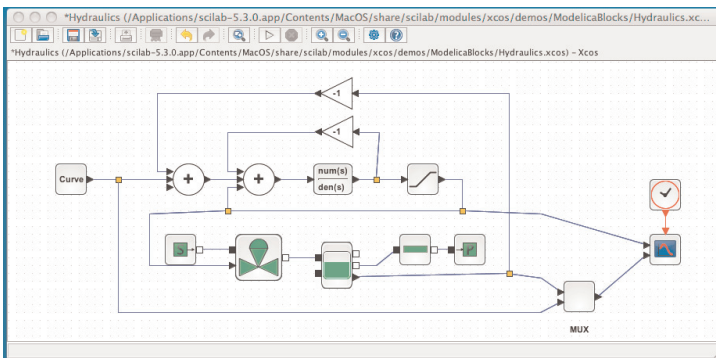


PERFORMANCE

- ▶ Faster access to primitive table (internal). This change improves the overall speed of Scilab.
- ▶ Improved access to the list of functions increases the performances.
- ▶ Rewrite 'mputl' as a built-in function for speed improvements.

Xcos

- ▶ Xcos palette management functions to manage user palettes and blocks. See SEP #45.



- ▶ The default palettes can now be manipulated by the user.
- ▶ New set of icons (better look and feel).
- ▶ Modelica compiler 1.12.1
- ▶ LaTeX formulas can be used on any TextBlock using the Scilab tag based description.
- ▶ `builnewblock.sci` rewritten to use Scilab dynamic link module tools.
- ▶ Introduction of the variable `%MODELICA_USER_LIBS` Allows a user to set where the Modelica files describing the user's Modelica blocks are.
- ▶ A new initialization UI for partial differential equations settings has been added.
- ▶ Include all the old-scicos palettes in the binary version.
- ▶ Use a user-friendly error message on the palette management implementation.
- ▶ Update to the latest jgraphx version.
- ▶ Loop link on a block produced some error when opening it.
- ▶ **Bug #4156 fixed** - Xcos defined some temp. variables on stack without removing them.
- ▶ **Bug #4705 fixed** - Xcos used a non-existing file `BEpsf`
- ▶ **Bug #4898 fixed** - The `scifunction_block` stored list() parameters on the `ipar` field instead of the `opar` field.
- ▶ **Bug #4977 fixed** - Some icons were duplicated between Gui and Xcos.
- ▶ **Bug #5022 fixed** - When opening some demos, `ArrayIndexOutOfBoundsException` were thrown by some Swing components.

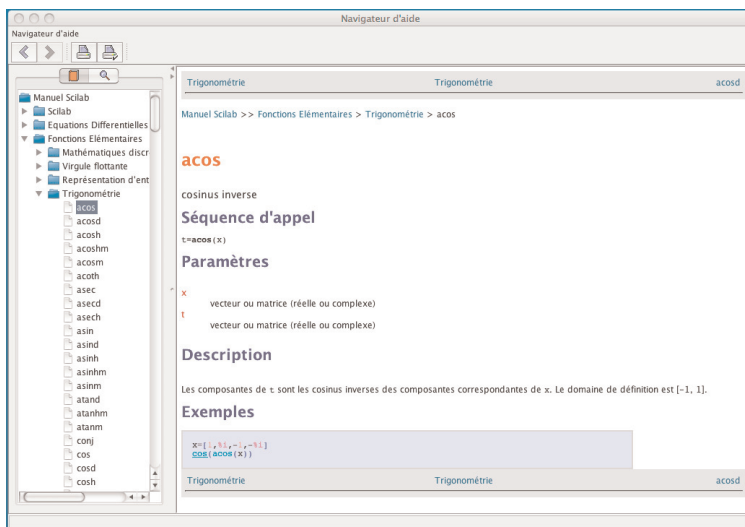
- ▶ **Bug #5161 fixed** - The export to SVG did not work with images or html.
- ▶ **Bug #5185 fixed** - It was not possible to edit the name of a super block.
- ▶ **Bug #5596 fixed** - It was not possible to change text block properties (font and color)
- ▶ **Bug #5640 fixed** - Toolbar and menubar were sometimes not visible at startup.
- ▶ **Bug #6440 fixed** - Xcos demos did not work and returned "Unable to open file" error.
- ▶ **Bug #6500 fixed** - The ideal transformer block was unusable due to wrong port positioning (update the Transformer demo).
- ▶ **Bug #6527 fixed** - There was several instances of the same variable name in the workspace when a data set was exported via a "To Workspace" block.
- ▶ **Bug #6661 fixed** - "Code Generation" menu failed.
- ▶ **Bug #6668 fixed** - Xcos Modelica demos did not work with the new Modelica compiler.
- ▶ **Bug #6672 fixed** - "Code generation" failed if superblock had some gain blocks.
- ▶ **Bug #6674 fixed** - Modelica generic block did not work.
- ▶ **Bug #6814 fixed** - Link point positions (`link.xx` and `link.yy`) were not exported as column vectors.
- ▶ **Bug #6900 fixed** - The block interfunction was not considered as Scilab macros.
- ▶ **Bug #6903 fixed** - `modelicat` called `ocamlrun` (wrong dependency on Windows).
- ▶ **Bug #6968 fixed** - Modelica Chaos Xcos demo was not simulating.
- ▶ **Bug #6981 fixed** - The Scilab 'exit' call was killing Xcos session without prompting the user if modified diagrams must be saved before exit.
- ▶ **Bug #7053 fixed** - Rotated saved blocks were not loaded with the right rotation value.
- ▶ **Bug #7089 fixed** - Drawing links when creating superblock threw an encoding exception.
- ▶ **Bug #7099 fixed** - `xml2modelica` called `ocamlrun` (wrong dependency on Windows).
- ▶ **Bug #7129 fixed** - Xcos hung at the opening of superblocks with context.
- ▶ **Bug #7143 fixed** - Simulation values were not valid when the exponential sign was an 'e'.
- ▶ **Bug #7175 fixed** - Demo bridge rectifier did not build on Windows.
- ▶ **Bug #7214 fixed** - Modelica demos did not generate a `.mo` file in `TMPDIR/modelica` directory.
- ▶ **Bug #7219 fixed** - The old gain demo did not work.
- ▶ **Bug #7372 fixed** - No message was displayed in the Xcos info bar during the first drag and drop of a block (it may take time).
- ▶ **Bug #7396 fixed** - On I/O blocks used in SuperBlocks, empty index threw a decoding exception.
- ▶ **Bug #7445 fixed** - The Kalman filter and the Cont-Plant-Hybrid-Observer demos did not simulate.
- ▶ **Bug #7480 fixed** - Xcos conditional compilation produced a too long script on Scilab queue.

- ▶ **Bug #7483 fixed** - A wrong id block could lead to unopenable files.
- ▶ **Bug #7520 fixed** - The Xcos context was not translated from parent diagram to child one.
- ▶ **Bug #7529 fixed** - Using the Xcos block help from the palette froze Scilab.
- ▶ **Bug #7530 fixed** - When connecting two links together in a superblock, the split block was not correctly positioned.
- ▶ **Bug #7532 fixed** - Old Scicos diagrams without diagram version numbers could not be opened.
- ▶ **Bug #7533 fixed** - On Xcos, it was possible to drop a block into another one.
- ▶ **Bug #7534 fixed** - On a RegionToSuperBlock action, the exported block parent field were not updated with the new parent diagram.
- ▶ **Bug #7540 fixed** - Xcos did not well serialized ScilabInteger types. This problem produced bugs on the LOGIC and BITSET blocks.
- ▶ **Bug #7551 fixed** - An Xcos block could not change the type of a port when it was already present.
- ▶ **Bug #7571 fixed** - The mirror state of a block was not saved on a diagram.
- ▶ **Bug #7574 fixed** - The Xcos diagram configuration settings did not work with exponential values.
- ▶ **Bug #7588 fixed** - When Xcos palettes had been installed in Scilab, they were not removed at the end of the session.
- ▶ **Bug #7256 fixed** - Saving a diagram with a non-ASCII filename created a corrupted file on Windows.
- ▶ **Bug #7498 fixed** - SPLIT_f were not always deleted when one of its connection were.
- ▶ **Bug #7622 fixed** - When opening an Xcos diagram done on 5.2.2, an exception could be thrown.
- ▶ **Bug #7628 fixed** - When importing Scicos diagram, type each port as "explicit" when not typed.
- ▶ **Bug #7631 fixed** - On Xcos, using xcosPalAdd modified the user palatte.xml file.
- ▶ **Bug #7635 fixed** - Xcos diagram with nested SuperBlocks did not contains a valid container reference.
- ▶ **Bug #7636 fixed** - The SUPER_f internal diagram was not coherent with the block external view.
- ▶ **Bug #7644 fixed** - The last user palette could not be removed from the palette tree.
- ▶ **Bug #7651 fixed** - scicos_math.h was missing in binary package.
- ▶ **Bug #7715 fixed** - Performances of xcosDiagramToHDF5 degraded after several subsequent calls to this function.
- ▶ **Bug #7716 fixed** - Block inter-functions were not loaded after using the xcosPal API and then starting Xcos.
- ▶ **Bug #7770 fixed** - It was not possible to compile a diagram with Modelica blocks.
- ▶ **Bug #7778 fixed** - The disabled buttons were badly colorized.
- ▶ **Bug #7809 fixed** - The AFFICH_m block settings did not update the block view.
- ▶ **Bug #7822 fixed** - Xcos menu bar was larger than the Scilab one.
- ▶ **Bug #7834 fixed** - The last argument of xcosPalAddBlock about the block style could not be changed by the user.
- ▶ **Bug #7845 fixed** - Code generation was broken.
- ▶ **Bug #7868 fixed** - Resizing a super-block with a lot of inputs or outputs sometimes changed the order of the ports.
- ▶ **Bug #7922 fixed** - The Automotive Suspension demo did not work.
- ▶ **Bug #7923 fixed** - The DSUPER block was not documented.
- ▶ **Bugs #7931, #7933, #7934 fixed** - Some artifacts were visible on diagrams such as wrong links and block names.
- ▶ **Bug #7942 fixed** - The "Start" button was not disabled when the diagram was empty.
- ▶ **Bug #7944 fixed** - "Fit diagram to view" was disabled after opening a diagram.
- ▶ **Bug #7945 fixed** - The diagram path was not displayed in the title bar.
- ▶ **Bug #7995 fixed** - The "export diagram" actions did not work with file without extension.
- ▶ **Bug #8014 fixed** - The TEXT_f.png file was not present on the source tree.
- ▶ **Bug #8025 fixed** - The simulation parameter dialog window was modal.
- ▶ **Bug #8052 fixed** - The I/O block value was used for computational purpose.
- ▶ **Bug #8071 fixed** - The PROD_f block in the Fibonacci demo was not well rendered.
- ▶ **Bug #8073 fixed** - The child context could not be used to specify masked super-blocks parameters.
- ▶ **Bug #8081 fixed** - The context was not checked before being set.
- ▶ **Bug #8097 fixed** - Scilab crashed when plotting on a figure with "Units" property set to "pixels".
- ▶ **Bug #8140 fixed** - Masked suberblock became empty when copied and pasted between two xcos schemes.
- ▶ **Bug #8141 fixed** - Superblock mask became empty when reopening a file.
- ▶ **Bug #8186 fixed** - Demos with Superblocks were not simulating.
- ▶ **Bug #8195 fixed** - Creating implicit links was not working.
- ▶ **Bug #8220 fixed** - Improve the link creation with split block adding.
- ▶ **Bug #8291 fixed** - Some blocks (PDE, SQRT) did not display any label.
- ▶ **Bug #8322 fixed** - Rotated shape had 2 different bounds (icon and shape).
- ▶ **Bug #8326 fixed** - Region to superblock action did not work with OUT_f blocks.
- ▶ **Bug #8331 fixed** - Block.doc was not cleared on superblock diagrams.
- ▶ **Bug #8397 fixed** - the simulation was blocked on a Modelica translator error.
- ▶ **Bug #8400 fixed** - start demos from Xcos menu (? --> Xcos demos) did not work.
- ▶ **Bug #8417 fixed** - An h5 diagram open a new diagram before the end of the decoding.
- ▶ **Bug #8556 fixed** - Creating a split block from a link did not work.
- ▶ **Bug #8569 fixed** - Deleting a link with a split-block did not reconstruct any valid link.

DOCUMENTATION

Massive improvement of the documentation system

- ▶ Improved navigation in the help browser and the web interface.
- ▶ Improved look and feel in the help browser and the web interface.



- ▶ Colorization of the Scilab code.
- ▶ In the examples, functions can be clicked to see their help pages.
- ▶ Improved maintainability.
- ▶ Faster build process (30 to 60 minutes => less than 30 seconds).

In the meantime, a work of categorization has been started in order to improve the Scilab documentation. More updates will follow in the upcoming versions of Scilab.

- ▶ Documentation of graphics functions moved in various dedicated documentation sections.
- ▶ Documentation of trigonometry functions moved in a dedicated documentation section.
- ▶ Documentation of profiling functions moved in a dedicated documentation section.
- ▶ Documentation of color management in graphics functions moved in a dedicated section. See Bug #7048.
- ▶ Documentation of floating point functions moved in a dedicated section. See Bug #7052.
- ▶ Documentation of integer representation functions moved in a dedicated section. See Bug #8268.
- ▶ Documentation of adj2sp was not in the sparse help section. See Bug #8269.
- ▶ Documentation of discrete mathematics functions moved in a dedicated section. See Bug #8270.
- ▶ It is now possible to use LaTeX in-lined in the documentation. Thanks to Calixte Denizet for this feature. (See Bug #4329)
- ▶ %helps_modules (global variable in Scilab) is only defined when Scilab build help and no more at Scilab's startup.

- ▶ **Bug #3811 fixed** - Documentation about "typeof" and overload prefixes was not up-to-date (help overloading).
- ▶ **Bug #4370 fixed** - Help page for alufunction and figure_properties were not up-to-date and the help page for pixel_drawing_mode was missing.
- ▶ **Bug #4857 fixed** - Help file of 'gsort' updated with sort of complex numbers and overloading.
- ▶ **Bug #5110 fixed** - Incomplete mgetstr documentation.
- ▶ **Bug #5123 fixed** - Help about '%helps' was wrong.
- ▶ **Bug #5136 fixed** - Information about dependant platform display of exponential form (%e) was missing in the printf_conversion documentation.
- ▶ **Bug #5366 fixed** - Help of modules_manager was not built.
- ▶ **Bug #5512 fixed** - The display order of input arguments was not described in the disp() documentation.
- ▶ **Bug #5541 fixed** - In the API documentation, the information that data must be allocated before calling API functions was missing.
- ▶ **Bug #5609 fixed** - Documentation stated incorrectly that fieldnames were working on cells.
- ▶ **Bug #6630 fixed** - JavaHelp did not update existing image files when building help.
- ▶ **Bug #6731 fixed** - Information on the output argument was missing from the lib() documentation.
- ▶ **Bug #6750 fixed** - TMPDIR constant had no help page.
- ▶ **Bug #6852 fixed** - JavaHelp did not center the LaTeX formulas containing an attribute align="center"
- ▶ **Bug #6862 fixed** - Help page for 'vectorfind' missed some explanations about input arguments types. Moreover there were missing checks about input arguments number and types in the function.
- ▶ **Bug #6946 fixed** - Information about optional input arguments 'column separator' and 'decimal mark' were missing in the write_csv documentation.
- ▶ **Bug #7036 fixed** - The plot2d document was incomplete (missing optional argument).
- ▶ **Bug #7121 fixed** - Help file about saveaftercommands(0) updated.
- ▶ **Bug #7158 fixed** - Help chapter on texmacs was empty.
- ▶ **Bug #7182 fixed** - Help file of link about the output argument updated.
- ▶ **Bug #7183 fixed** - Help file of ulink about the input argument updated.
- ▶ **Bug #7228 fixed** - Help file of stratcat about the third input argument updated.
- ▶ **Bug #7371 fixed** - Documentation about cell did not precise that the value returned by A.dims could not be used as a subscript.
- ▶ **Bug #7391 fixed** - Links added between help files on evstr, eval, execstr.
- ▶ **Bug #7519 fixed** - Help page of getcallbackobject() did not describe input argument.
- ▶ **Bug #7661 fixed** - Add some usage examples for the function 'warning'.
- ▶ **Bug #7690 fixed** - Long lines removed in the parallel_run help page.
- ▶ **Bug #7703 fixed** - 'coding_ga_identity' help contained false See Also".
- ▶ **Bug #7704 fixed** - 'init_ga_default' help did not inform the default values of the optional parameters.

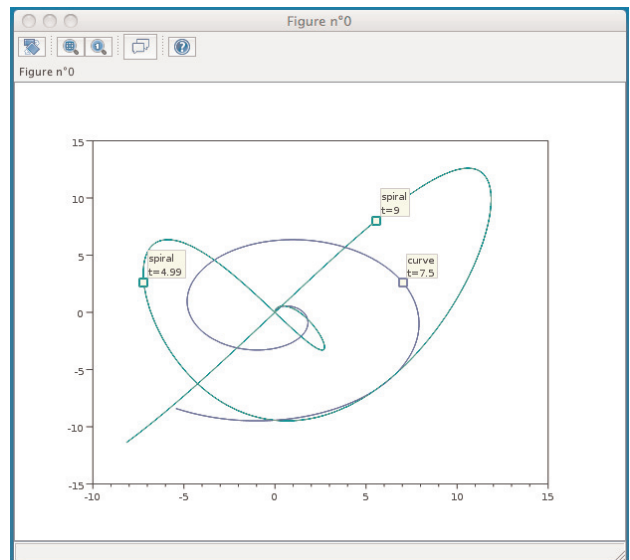
- ▶ **Bug #7706 fixed** - example in the 'optim_ga' help page did not work.
- ▶ **Bug #7748 fixed** - The help page of rcond was wrong: only one output argument is provided.
- ▶ **Bug #7755 fixed** - Some sparse help pages moved from elementary_functions to the sparse chapter.
- ▶ **Bug #7940 fixed** - Typo fixed in the parallel_run documentation.
- ▶ **Bug #8122 fixed** - help of write_csv said that it reads file and not that it wrote.
- ▶ **Bug #8164 fixed** - Typo in the fileparts help page.
- ▶ **Bug #8318 fixed** - help window was not brought up to front when already opened.
- ▶ **Bugs #8357, #8358 fixed** - There was an encoding problem under Windows.
- ▶ **Bug #8367 fixed** - In synopsis function, ' were displayed rather than '.
- ▶ **Bug #8598 fixed** - Fix a typo in the french help page of "return".

ATOMS

- ▶ ATOMS client: Categories are now managed.
 - atomsList(category) limits the list of modules to a category.
 - atomsCategoryList() lists available categories.
- ▶ The ATOMS GUI ergonomics has been improved.
- ▶ ATOMS GUI: Modules can be filtered by category (See request 5276).
- ▶ ATOMS GUI: When a module is not up-to-date, a warning is displayed on the corresponding sheet.
- ▶ ATOMS GUI: Display the release date of the watched module.
- ▶ **Bug #5276 fixed** - ATOMS GUI: It was not possible to filter modules by category.
- ▶ **Bug #6596 fixed** - When the ATOMS GUI started, nothing was displayed. Now, the list of already installed modules appears on the home page.
- ▶ **Bug #6842 fixed** - If the installed version of a module was not the most recent one, the ATOMS GUI claimed that the newest version was installed.
- ▶ **Bug #6976 fixed** - ATOMS GUI: Webpages URLs linked with a module were missing from the presentation frame.
- ▶ **Bug #6977 fixed** - ATOMS GUI: In the presentation frame, URLs and emails were not hyperlinked.
- ▶ **Bug #7149 fixed** - An error message of atomsDESCRIPTIONread() was badly formatted.
- ▶ **Bug #7208 fixed** - The help for atomsGetLoaded() gave the wrong shape for the loaded matrix.

GRAPHICS

- ▶ The set and get functions can now be overloaded.
- ▶ Datatips tools added. For more information, see the help page of datatips or SEP #29.



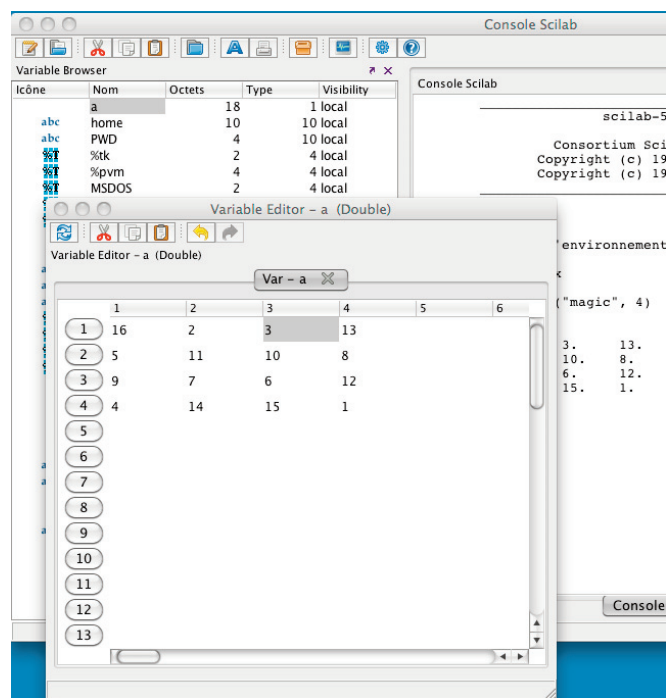
- ▶ Thanks to Samuel Gougeon, many improvements on the polarplot function:
 - Clipping was missing. See Bug #7007.
 - In some common cases, values of radial labels were wrong with respect to the plotted radial frame or/and were lacking of digits.
 - When the plot was centered around an angle far from 45° , the radial labels were completely clipped.
 - Sampling of the angular frame is improved according to the number of drawn quadrants.
 - Improved H&V positioning of angular labels
 - Polar frame drawn in grey instead of black for a better data visibility.
 - If the basic radius is $\geq 10^4$ or $\leq 10^{-4}$, LaTeX is used to display smart 10^p exponents instead of the D+/-## console style display.
 - Finally, their positioning is still improved in order to avoid their mutual overlaying for big values.
- ▶ The frequency response plots ("bode", "black", "nyquist", "gainplot",...) support customized datatips.
- ▶ Anti-aliasing activated by default to render text.
- ▶ The icons have been updated to the Tango Art libre icons and to the Inkscape themable icons.
- ▶ Two additional Graphics demos about plotyy() and plotyyy() added. See Bug #7687 Thanks to Samuel Gougeon.
- ▶ **Bug #2651 fixed** - "plot2d" was not working when the x argument was not given and some optional arguments were given.
- ▶ **Bug #3975 fixed** - The "xload" function was not able to load the contents of a previously saved graphic figure into a different one.
- ▶ **Bug #4247 fixed** - The command "xclick" did not work correctly.

- ▶ **Bug #4531 fixed** - "legend" macros were not displaying any error when no 'Polyline' existed.
- ▶ **Bug #4658 fixed** - When some graphic functions were called without any arguments, the error was not explicit enough.
- ▶ **Bug #5284 fixed** - In some cases, the function "legend" drew line segments in its box in a reverse order.
- ▶ **Bug #5606 fixed** - In certain cases, user-defined x-axis ticks were not correctly aligned.
- ▶ **Bug #6098 fixed** - It was not possible to get values by clicking on a point of Bode diagram.
- ▶ **Bug #6394 fixed** - The "black", "m_circle", "chart" functions has been improved for a better rendering and datatips customization. Two new functions created: "hallchart" (superseed "m_circle") and "nicholschart" (superseed "chart").
- ▶ **Bug #6395 fixed** - evans display improved to take special care of the root loci points where complex conjugates roots collapsed in a pair of real roots. Datatips customization added. Root locus grids "sgrid" and "zgrid" superposition improved.
- ▶ **Bug #6532 fixed** - In some case text entity rendering order was wrong.
- ▶ **Bug #6676 fixed** - When "twinkle(gca())" was executed, data related to the current axes was not twinkling.
- ▶ **Bug #6686 fixed** - The automatic sub-ticking gave wrong results. Thanks to Paul Griffiths for the fix.
- ▶ **Bug #6786 fixed** - The "polarplot" function did not correctly display the polar coordinated grid when negative rho values were plotted.
- ▶ **Bug #6835 fixed** - Performing an interactive rotation after having executed the "plot3d" function caused Scilab to freeze on 64-bit Windows.
- ▶ **Bug #6848 fixed** - The patterns of the lines were poorly exported.
- ▶ **Bug #6910 fixed** - The font size in LaTeX labels was too big.
- ▶ **Bug #6958 fixed** - The "tics_labels" property from "axes" rejected column vector of labels.
- ▶ **Bug #6959 fixed** - axis.tics_labels did not accept \$..\$ LaTeX labels.
- ▶ **Bug #7024 fixed** - Error messages from "twinkle" were not standard.
- ▶ **Bug #7028 fixed** - When Scilab printed an "axis" graphic handle, string array size for "tics_labels" was erroneous.
- ▶ **Bug #7065 fixed** - "getColorIndex" used some global variables prohibiting user's calls.
- ▶ **Bug #7067 fixed** - The "isoview" macro created an unnecessary "plot" object.
- ▶ **Bug #7075 fixed** - When the "links" property was set for a handle of type "legend", the property type was not checked.
- ▶ **Bug #7079 fixed** - The "mtlb_get" used a "h" global variable instead of the given "H" argument.
- ▶ **Bug #7110 fixed** - When inserting a structure in a handle, the handle was overwritten.
- ▶ **Bug #7137 fixed** - In Text uicontrol, fontsize was rounded which was problematic when fontUnits was 'normalized'.

- ▶ **Bug #7172 fixed** - Executing the "scaling" function caused a function redefinition warning due to its "factor" input argument.
- ▶ **Bug #7173 fixed** - The equation in the "scaling" help page was incorrect.
- ▶ **Bug #7187 fixed** - Plotting a curve, zooming, and then plotting an additional curve caused Scilab to freeze, depending on the zoomed-in area.
- ▶ **Bug #7188 fixed** - Deleting a Label graphics entity caused Scilab to crash.
- ▶ **Bug #7353 fixed** - Setting a Polyline's "interp_color_mode" property to "on" without having previously set its "interp_color_vector" property caused Scilab to crash.
- ▶ **Bug #7492 fixed** - If its "data_mapping" property was set to "direct", the Grayplot object's data seemed to be transposed when displayed.
- ▶ **Bug #7857 fixed** - If an event_handler was previously assigned to a graphic window the datatips toggle tool icon had to be clicked twice to make it active.
- ▶ **Bug #8168 fixed** - Adding a datatip in a figure that mix surface and curve generated a zero divide error.

VARIABLE EDITOR (EDITVAR) / VARIABLE BROWSER (BROWSEVAR)

- ▶ New variable editor & New variable browser included.

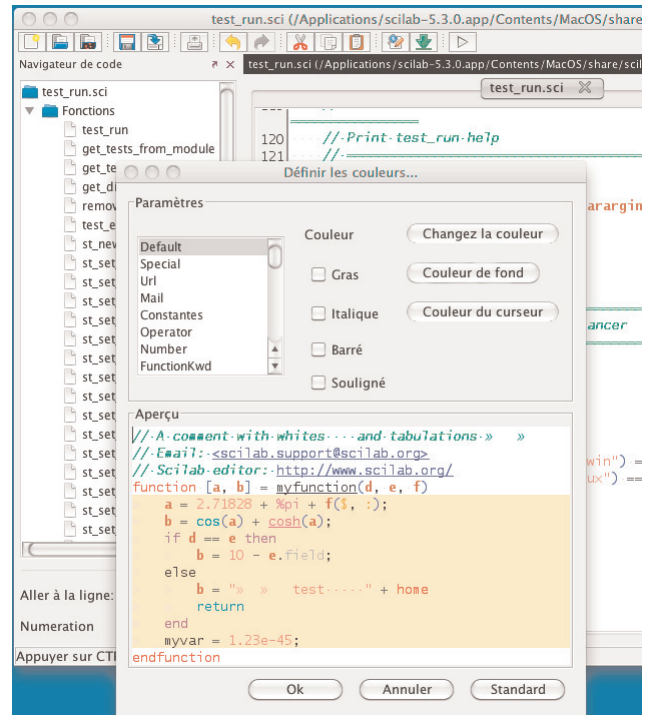


- ▶ Actions such as Copy, Cut, Paste, Undo and Redo have been added.
- ▶ In a cell of editvar, expressions such as =2+2 are now accepted. See Bug #7319.
- ▶ A refresh button to synchronize the variable from Scilab has been added. See Bug #7321

- ▶ **Bug #7324 fixed** - editvar() did not work for string variables.
- ▶ **Bug #7325 fixed** - An error message did not respect the standard format.
- ▶ **Bug #7327 fixed** - Memory problems could lead to a crash without warning.
- ▶ **Bug #7328 fixed** - editvar() window title did not contain the name of the edited variable.
- ▶ **Bug #7329 fixed** - If editvar() window was docked, calling editvar another time threw java exceptions and froze editvar().
- ▶ **Bug #7330 fixed** - browsevar() called editvar() even if the latter did not handle the variable type.
- ▶ **Bug #7332 fixed** - browsevar(): When checked booleans were hidden and unchecked booleans were displayed, the "boolean" menu was reversed.
- ▶ **Bug #7333 fixed** - browsevar(): The type of global variables had weird values.
- ▶ **Bug #7334 fixed** - browsevar(): Some columns had wrong names.
- ▶ **Bug #7337 fixed** - browsevar(): Some types could not be filtered (Scilab intrinsic, Matlab sparse and implicit polynomial).
- ▶ **Bug #7338 fixed** - %nan and %inf were not correctly displayed.
- ▶ **Bug #7340 fixed** - %t or %f were not correctly displayed.
- ▶ **Bug #7343 fixed** - editvar could not edit empty matrices.
- ▶ **Bug #7610 fixed** - browsevar(): The icons (left column) did not appear in the binary version (Linux & Mac OS X).
- ▶ **Bug #7617 fixed** - editvar() window did not have any menu bar.
- ▶ **Bug #7627 fixed** - When browsevar() window was docked, if browsevar() was called again, an empty window popped up and could not be closed.
- ▶ **Bug #7629 fixed** - browsevar(): Trying to edit a variable that no more exists generated an error.
- ▶ **Bug #7839 fixed** - A global variable could be modified.

SciNOTES (TEXT EDITOR)

- ▶ The Scilab Consortium would like to express their congratulations to Calixte Denizet for his impressive work on the recent developments on SciNotes.
- ▶ Distributed with a new name: SciNotes.
- ▶ Complete refactoring of the text editor. This change improves the speed, the stability of the editor and also improves many aspects of SciNotes.



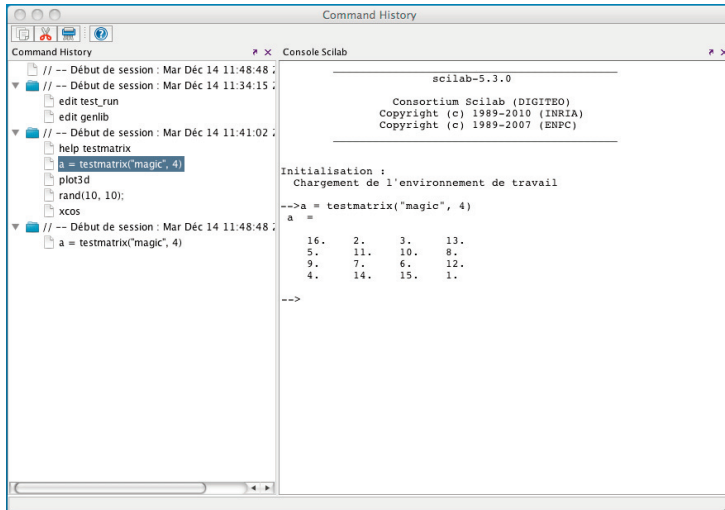
- ▶ Add the possibility to complete on-the-fly typing. Ex: type '[' gives '['] or keywords (e.g. type 'if ' gives 'if <CR>end')
- ▶ Add the possibility to have several instances of the editor and to dock them (or not).
- ▶ LaTeX formula in comments or in a string are now rendered when the mouse cursor is over.
- ▶ Block text (function, if, while...) are now easily selectable. See Bug #7546.
- ▶ Incremental search added with the shortcut: the F2 key.
- ▶ Add a "Save file in..." menu which gives the possibility to save a file in favorite directories.
- ▶ Add the possibility to remove trailing whitespaces.
- ▶ Improve the "help on keyword" from the popup menu.
- ▶ Anchors can be added in the source code and one can navigate between them with the Code Navigator.
- ▶ Add the possibility to restore the last session (thanks to Paul Griffiths).
- ▶ Add a close-button on the tabs and the possibility to drag&drop them.
- ▶ **Bugs #4399, #4922 fixed** - The line numbering could not be compatible with the output of the 'whereami' function.
- ▶ **Bug #4399 fixed** - It was not possible to distinguish lines from inner functions and from normal functions.

- ▶ **Bug #4790 fixed** - A broken string (with .. operator) was badly colorized.
- ▶ **Bug #4865 fixed** - The buttons to undo and redo were not disabled when there was nothing to undo or redo.
- ▶ **Bug #4872 fixed** - A binary file was opened like a text file.
- ▶ **Bug #4907 fixed** - The source code of a given macro could not be opened.
- ▶ **Bug #4916 fixed** - Problem with 'See the code' in the demos.
- ▶ **Bug #4990 fixed** - When the argument was a directory, an error was displayed.
- ▶ **Bug #4992 fixed** - There was no possibility to split a window with the same contents.
- ▶ **Bug #5087 fixed** - Different keywords were not split in different categories.
- ▶ **Bug #5102 fixed** - It was not possible to choose the font weight or the font style for a keyword category.
- ▶ **Bug #5113 fixed** - Bad refresh of the application title in some cases.
- ▶ **Bug #5124 fixed** - Editor's title was not updated when a file was saved as...
- ▶ **Bugs #5126, #6519 fixed** - Problems appeared after using undo a few times.
- ▶ **Bug #5175 fixed** - Ghost text appeared in the view.
- ▶ **Bug #5178 fixed** - The kind of tabulations (hard tabulations or spaces) could not be specified.
- ▶ **Bug #5204 fixed** - Weird display of 'else' keyword.
- ▶ **Bug #5261 fixed** - Several instances of the editor could not be opened.
- ▶ **Bug #5269 fixed** - Help could not be reached on a keyword with CTRL+F1.
- ▶ **Bug #5320 fixed** - A correct name was not proposed on the 'Save as' action.
- ▶ **Bug #5321 fixed** - There was no possibility to choose the length of a tabulation.
- ▶ **Bug #5473 fixed** - It was not possible to generate a function help template using help_from_sci.
- ▶ **Bug #5534 fixed** - Auto-completion was not available.
- ▶ **Bug #5632 fixed** - A file in read-only mode could not be opened.
- ▶ **Bug #5644 fixed** - The DragN'Drop text was copied rather than moved.
- ▶ **Bug #5645 fixed** - Undo action deleted a line rather than making it visible.
- ▶ **Bugs #5646, #5658 fixed** - The undo/redo strategy was failing in some cases.
- ▶ **Bug #5647 fixed** - Bad line numbering when a file was just opened.
- ▶ **Bug #5648 fixed** - The editor let you think that you can change a filename just in changing the case.
- ▶ **Bug #5652 fixed** - Bad line numbering when several files were opened.
- ▶ **Bug #5654 fixed** - The editor did not save the user preferences.
- ▶ **Bug #5655 fixed** - The selection was lost after an unsuccessful search.
- ▶ **Bug #5656 fixed** - When a part of text was selected, the search was done on the full document.
- ▶ **Bug #5657 fixed** - Control+End did not move the cursor to the end of the file.
- ▶ **Bug #5681 fixed** - The search window was not put in front of the editor's one.
- ▶ **Bug #5682 fixed** - A problem occurred in some cases with the replace action.
- ▶ **Bug #6479 fixed** - A problem occurred in some cases when a '{' was used in comments.
- ▶ **Bug #6496 fixed** - Add hyperlinks on macros in SciNotes.
- ▶ **Bug #6515 fixed** - The DragN'Drop text was copied at the end of the file.
- ▶ **Bug #6658 fixed** - The position and size of the editor were not saved.
- ▶ **Bug #6670 fixed** - There was no shortcut for the "Evaluate Selection" action.
- ▶ **Bug #6748 fixed** - There was a time problem between local computer and remote file system.
- ▶ **Bug #6807 fixed** - '.*' was not correctly highlighted.
- ▶ **Bug #6980 fixed** - When a replaced text contained a '\', the backslash was considered as a special character.
- ▶ **Bug #7032 fixed** - There was a problem when a filename contained a ' or a ".
- ▶ **Bug #7088 fixed** - The editor freezes when a user copied/pasted several times.
- ▶ **Bug #7112 fixed** - Two transpositions gave a string (if a'==1 then a=b').
- ▶ **Bug #7150 fixed** - It was impossible to change the background color.
- ▶ **Bug #7237 fixed** - Whites and tabs were not visible in strings and in comments.
- ▶ **Bug #7238 fixed** - The dot/del key on the numeric pad added a suppr' and a dot.
- ▶ **Bug #7239 fixed** - Font style was lost on a selected text.
- ▶ **Bug #7240 fixed** - The menu "Open source file" was active even if nothing could be opened.
- ▶ **Bug #7262 fixed** - An exception was thrown when a text was dragged and dropped.
- ▶ **Bug #7263 fixed** - Scilab code could not be copy as HTML to keep the formatting.
- ▶ **Bug #7272 fixed** - No check on the lastModified property was performed when a file was opened.
- ▶ **Bug #7277 fixed** - The "recent files" list was badly ordered.
- ▶ **Bug #7281 fixed** - The menu "Evaluate selection" did not change when nothing was selected.
- ▶ **Bug #7299 fixed** - There was a bad matching by the right for the expression n=size(x, ""); r=(x*x')
- ▶ **Bug #7352 fixed** - No completion menu on the right click.
- ▶ **Bug #7421 fixed** - The source file of a selected name with right click could not be opened.
- ▶ **Bugs #7462, #7463 fixed** - The editor did not manage files with extensions *.tst, *.start, *.quit.
- ▶ **Bug #7477 fixed** - Bad detection of a function declaration when the line ended with a comment.
- ▶ **Bug #7491 fixed** - Broken lines with a .. were not correctly handled and caused a freeze of SciNotes.
- ▶ **Bug #7550 fixed** - In SciNotes, the "case" keyword was misplaced in some cases.
- ▶ **Bug #7557 fixed** - SciNotes: unselected line was tabified.

- ▶ **Bug #7558 fixed** - SciNotes: global variables were reached before local ones.
- ▶ **Bug #7564 fixed** - In SciNotes, no message was displayed when an unsuccessful search occurred.
- ▶ **Bug #7586 fixed** - ShortCut for 'Save' action was missing in SciNotes.
- ▶ **Bug #7590 fixed** - In SciNotes, there was a bad organization of "Split..." and "Line Numbering..." menus.
- ▶ **Bug #7595 fixed** - In SciNotes, a string was broken if '.' was encountered.
- ▶ **Bugs #7276, 7726 fixed** - There was a highlighting problem with default font.
- ▶ **Bug #7554 fixed** - Auto-completion on typing was too general.
- ▶ **Bug #7618 fixed** - The color background change generated an exception.
- ▶ **Bug #7621 fixed** - The font change generated an exception.
- ▶ **Bug #7623 fixed** - "Evaluate Selection" evaluated the selection with one added char.
- ▶ **Bug #7673 fixed** - The extension ".dem" was not available in Open or Save actions.
- ▶ **Bug #7676 fixed** - The SaveAs action did not remove "readonly" mode.
- ▶ **Bug #7677 fixed** - User could not open files in his favorite directories.
- ▶ **Bug #7678 fixed** - Help action did not give help on selection.
- ▶ **Bug #682 fixed** - The knob of the vertical scrollbar moved badly on resize.
- ▶ **Bug #7718 fixed** - There was a bad detection of a function when the list of args was broken.
- ▶ **Bug #7719 fixed** - It was not possible to open several files at the same time through the file chooser.
- ▶ **Bug #7719 fixed** - It was not possible to open several files at the same time.
- ▶ **Bug #7722 fixed** - Several FindReplace windows could be opened.
- ▶ **Bug #7731 fixed** - In Find/Replace window, buttons were not updated when an item was chosen in the combobox Find.
- ▶ **Bug #7746 fixed** - File streams were not closed. This problem was causing some issues under Windows.
- ▶ **Bug #7759 fixed** - Several Code Navigator instances were possible.
- ▶ **Bugs #5321, #7760 fixed** - It was not easy to configure the tabulation.
- ▶ **Bug #7762 fixed** - A keyword was not fully helpable depending on the caret position.
- ▶ **Bug #7764 fixed** - The CR in comments was removed when executing from SciNotes.
- ▶ **Bug #7774 fixed** - The default tabulation was \t.
- ▶ **Bug #7801 fixed** - The FindReplace window could not be canceled with ESC.
- ▶ **Bug #7806 fixed** - Blocks elseif...end and else...end were not highlighted.
- ▶ **Bug #7807 fixed** - The SaveAs or Save actions emitted an error message when cancelled.
- ▶ **Bug #7808 fixed** - The RestoreSession window could not be cancelled with ESC.
- ▶ **Bug #7830 fixed** - There was a problem when opening a file at a line number.
- ▶ **Bug #7842 fixed** - There was not the filepath in the title bar.
- ▶ **Bug #7524 fixed** - Tabulation representation had a bad size in whitespace mode.
- ▶ **Bug #8008 fixed** - The "Edition" menu had an incorrect name (renamed to "Edit").
- ▶ **Bug #8024 fixed** - No key Insert had no effect.
- ▶ **Bug V8027 fixed** - In a splitted view, a frame was not informed of a change in the other frame.
- ▶ **Bug #8056 fixed** - Comments were badly colorized after a command without parenthesis.
- ▶ **Bug #8061 fixed** - An unwanted message box was displayed when an unsaved file was executed.
- ▶ **Bug #8085 fixed** - It was not possible to disable the horizontal line wrapping.
- ▶ **Bug #8095 fixed** - The Set Colors window was too height with OpenJDK.
- ▶ **Bug #8135 fixed** - An exception was thrown when restoring files on MacOS X.
- ▶ **Bug #8166 fixed** - All the checkboxes in SciNotes 'Preferences' menu were inefficient.
- ▶ **Bug #8227 fixed** - The commands evaluated with "Evaluate selection" were not stored in history.
- ▶ **Bug #8229 fixed** - There was a problem of selection after an indentation.
- ▶ **Bug #8230 fixed** - Save As action did not propose the current file name as default.
- ▶ **Bug #8267 fixed** - The file encoding was not correctly detected and no default encoding was set.
- ▶ **Bug #8277 fixed** - Under Windows, exceptions were thrown when a key was hit on a keyboard in Chinese mode.
- ▶ **Bug #8304 fixed** - A Java exception was thrown on Exit menu.
- ▶ **Bug #8309 fixed** - Bad display of the line number in whereami mode with broken lines.
- ▶ **Bug #8359 fixed** - An exception was thrown on Save As action.
- ▶ **Bug #8368 fixed** - Incremental search did not correctly highlight the pattern under Windows.
- ▶ **Bug #8381 fixed** - It was not logical to add favorite dirs only in "Open file in" action.
- ▶ **Bug #8465 fixed** - Under GNU/Linux, it was not possible to paste with the middle click.

HISTORY MANAGER

- ▶ History browser: user can now edit and browse its commands' history from previous Scilab sessions in a brand new GUI, fully integrated in Scilab docking system.



- ▶ "// End Session" line removed from the history file.
- ▶ Begin session line identified by "// --" and finished by "--//".
- ▶ **Bug #7437 fixed** - If history file was invalid, history browser crashed.
- ▶ **Bug #7441 fixed** - The history browser crashed if the language was changed.

PARALLEL EXECUTION

- ▶ Function 'parallel_run' has been introduced for GNU/Linux and Mac OS X. This function allows parallel computations and leverages multi-core architectures and their capacities.
For more information, see the help page of 'parallel_run' or SEP #43.

COMPILATION

- ▶ Fix "warning: deprecated conversion from string constant to 'char'" message when compiling a toolbox using Scierror(...) and sciprint(...).
- ▶ -fwritable-strings C argument removed for all architectures under Linux (was causing some build issues under sparc, alpha and powerpc).
- ▶ A problem on startup with GNU/Linux sparc has been fixed.
- ▶ The Java "user.home" property has been set to SCIHOME.
- ▶ Update Lapack to 3.2.2 on Windows (fix bugs 7754, 7485, 6477).
- ▶ Update JLaTeXMath to version 0.9.3.
- ▶ Fix a problem in the detection of some ARM cpus.
- ▶ On Windows, Pentium III class (or equivalent) with SSE instructions is required.
- ▶ Scilab_f2c.sln can be exported to VS 2010 format.
- ▶ Windows 2000 operating system is no more supported.

- ▶ Scilab Mac OS X distribution only relies on Java 1.6 and is therefore now only available under 64-bit OS (Most of 10.5 and all 10.6 Mac OS X versions).
- ▶ Under Mac OS X, uses /usr/libexec/java_home instead of hard-coded paths to retrieve JAVA_HOME
- ▶ special_functions module is dynamically loaded by Scilab.
- ▶ tlcsci module is dynamically loaded by Scilab.
- ▶ pvm module is dynamically loaded by Scilab.
- ▶ Many warnings detected by Intel Fortran 11.1.051 and more on Windows fixed.
- ▶ Better detection system of the dependencies version.
- ▶ Add a check of the minimal installations of hdf5 (1.8.4), batik (1.7).
- ▶ /usr/share/* /lib added to the Java search path for OpenSuse.
- ▶ Option --enable-compilation-tests added to the configure. With this option, if TestNG has been found, tests will be launched at compilation time.
- ▶ Added /usr/lib to JNI search path. Gluegen-rt needed it on openSUSE.
- ▶ **Bug #4300 fixed** - Moving Command Queue management to core.
- ▶ **Bug #6432 fixed** - Checkstyle disabled on SWIG (Java/JNI) generated files.
- ▶ **Bug #6643 fixed** - ---without-gui failed to disable Ocaml build (A Xcos dependency).
- ▶ **Bug #6857 fixed** - make CXXFLAGS="-myflag" was removing some C++ arguments.
- ▶ **Bug #7489 fixed** - VPATH was failing on scicos_blocks generation headers. Note that the VPATH build system is not fully available.
- ▶ **Bug #7606 fixed** - Build option -Wold-style-cast removed for C++.
- ▶ **Bug #7668 fixed** - Scilab 5.3.0-beta-2 did not build with Visual Studio 2008 Express.
- ▶ **Bug #8013 fixed** - In some cases, the build of the compiler of modelica failed.
- ▶ **Bug #8274 fixed** - Improve detection of Java regarding Apple changes: Java for Mac OS X 10.6 Update 3 and 10.5 Update 8 Release Notes

JAVASCI

A new version of the Java to Scilab interface called Javasci v2 is now included into the Scilab distribution. This version fixes most the issues and limitations of the previous version.

Javasci is a full Java API enabling a strong connection between the Java world and the Scilab engine. This API also provides Java wrappings of the Scilab data types. This API is automatically fully tested through unitary tests and code coverage.

Please, note that previous version of Javasci remains available and shipped into the Scilab distribution. Advanced documentation and examples are provided.

API_SCILAB

- ▶ Error(x) is now deprecated and will be removed in Scilab 5.4. Please use SciError(x) instead.

CALL_SCILAB

- ▶ In StartScilab function, "int *Stacksize" argument changed to "int Stacksize"
- ▶ In 'API' mode, history manager is disabled.
- ▶ Function "sci_types getVariableType(char *varName)" added into call_scilab.h This function provides an easy way to retrieve the type of a variable.
- ▶ **Bug #7601 fixed** - call_scilab C functions did not check if engine was started.
- ▶ **Bug #7602 fixed** - It was not possible to start/close a Scilab engine at any time.
- ▶ **Bug #8115 fixed** - DisableInteractiveMode() (call_scilab) did not work.

SCILAB GUI

Some long-standing usability bugs have been fixed in this release.

Contributions from the Scilab team have been done on the Flexdock project to fix these issues.

- ▶ In some cases, the selection in the console disappeared.
- ▶ If a subwindow is not docked, it is not possible to close a subwindow with its own "cross" anymore
- ▶ **Bugs #1589, #3994 fixed** - On Startup, Scilab console did not have the focus. The user had to click in the main window to gain focus.
- ▶ **Bug #3614 fixed** - Sub-applications could not have their own icons. This problem was causing some issues with the "Alt-Tab" features under some operating systems.
- ▶ **Bug #4423 fixed** - It was not possible to navigate in Scilab's menu with arrow keys.
- ▶ **Bug #5708 fixed** - A focus problem between the console and the editor happened when SciNotes was started from the console.
- ▶ **Bugs #7572, #5519 fixed** - The cross in the dockbar was confusing when a window was not docked.
- ▶ **Bug #7625 fixed** - Some selection issues were appearing from time to time when Scilab was losing the focus.

OBSOLETE FUNCTIONS

- ▶ 'MSDOS' obsolete. Please use 'getos' instead (SEP #39).
- ▶ 'with_lcc', 'VCtoLCCLib', 'chooselcccompiler', 'configure_lcc', 'findlcccompiler' have been moved as modules in ATOMS
See <http://atoms.scilab.org/toolboxes/LCC-windows> or atomsInstall('lcc-windows') from Scilab.
- ▶ 'maxi' obsolete see 'max'.
- ▶ 'maxi' obsolete. Please use 'max' instead.
- ▶ 'mini' obsolete. Please use 'min' instead.
- ▶ 'xselect' obsolete. Please use 'show_window' instead.

- ▶ 'oldbesseli', 'oldbesselj', 'oldbesselk' and 'oldbessely' are obsolete. Please use 'besseli', 'besselj', 'besselk' and 'bessely' instead.
- ▶ bug 3100 fixed - The "xselect" function has been made obsolete and replaced by "show_window", in accordance with its help page.

LOCALIZATION

- ▶ Polish localization added. Thanks to Paweł Dąbrowski, Ernest Życiński, Sebastian Sławski, Kamil Dąbrowski, Kamil Strojek, Kamil Dąbrowski, Michał Snoc, Piotr Seroka
- ▶ **Bug #3069 fixed** - In some cases, the function gettext was returning \"
- ▶ **Bug #7059 fixed** - The tag X-Launchpad-Export-Date has been removed to avoid huge and useless difference after a launchpad synchronization.
- ▶ **Bug #7220 fixed** - On Windows, when you started Scilab with "WScilex -l ru_RU", some menus were disabled.
- ▶ **Bug #7459 fixed** - Character issues fixed on some Japanese systems.

COMPLETION

- ▶ Add completion on fields of mlist, tlist, struct and graphic handles in console.

DYNAMIC LINK

- ▶ Intel Fortran Composer XE 2011 (12) support on Windows x86 and x64 platform.
- ▶ Microsoft Visual Studio 2010 Express and Professional support on Windows x86 and x64 platform.
- ▶ Microsoft Visual Studio 2008 Express support on Windows x64 platform It requires to install Windows SDK to add x64 component on Visual Studio.
- ▶ lcc-win32 support moved as module in ATOMS. It will be easier to maintain with new versions of lcc-win32.
- ▶ Intel Fortran 12 (beta) support on Windows x86 and x64 platform.
- ▶ 5th argument of 'ilib_compile', 'ilib_for_link', 'ilib_gen_cleaner', 'ilib_gen_Make', 'ilib_mex_build', 'ilib_build' is deprecated. default value of makefile name must be [].
- ▶ **Bug #4265 fixed** - The execution of the dynamic link functions (ilib_*) continued even if a compiler was not available.
- ▶ **Bug #5737 fixed** - loader.sce generated by ilib_gen_loader did not detect if it was a x86 dll or a x64 dll used with a scilab x64 or x86, on Windows.
- ▶ **Bug #7014 fixed** - ilib_verbose value was modified after toolbox_skeleton.
- ▶ **Bug #7481 fixed** - 6th input argument of ilib_for_link did not allow to set library name on Windows.
- ▶ **Bug #8294 fixed** - A help page about "supported compilers" has been added.
- ▶ **Bug #8299 fixed** - ilib_compile did not return enough feedback on Windows when compilation failed.

OPTIMIZATION

- ▶ Simulated annealing: Added documentation for `accept_func_default` and `accept_func_vfsa`.
- ▶ `minsearch`: updated printing of `neldermead`, `optimbase` and `optimsimplex` objects.
- ▶ `fminsearch`: added demo for dimensionality effect of the Nelder-Mead algorithm.

GRAPHIC EXPORT

- ▶ Decrease the amount of feedbacks when exporting a graphic.

LICENSE

The license of all demos and examples have been changed to the 3-clause BSD license.

SECURITY ISSUE

- ▶ Fix a (minor) security issue. CVE-2010-3378
See:
<http://security-tracker.debian.org/tracker/CVE-2010-3378>
- ▶ Under GNU/Linux, Unix and Mac OS X, for security purposes, temporary directory name is now randomized and permissions are limited to the user (See Bug #3493).
- ▶ Under GNU/Linux, Unix and Mac OS X, if `TMPDIR` is set, Scilab will respect it to store its temporary files (See Bug #3493).
- ▶ Under non-Windows system, the name of the temporary directory has been changed from `SD_*` to `SCI_TMP_*` to match the current Windows behavior.

TESTS

- ▶ Mechanism of unitary tests for Java code based on TestNG added and used.
- ▶ `test_run()` now accepts ATOMS modules as input argument.

MATLAB TO SCILAB CONVERSION TOOLS

- ▶ Unitary tests added.
- ▶ Matlab-Scilab equivalents dictionary added in documentation.
- ▶ In `'mfile2sci'`, option `only_double` is now set to `%T` as default.
- ▶ Conversion updated with new Scilab functions:
 - `'filesep'` now converted by `'filesep'` instead of `'pathconvert'`.

STATISTICS

- ▶ Examples added in the "cdfnor" help page.

FFTW

- ▶ On Windows, Scilab can use FFTW3 wrapper of Intel Math Kernel Library. Select "Download FFTW3 wrapper optimized by Intel Math Kernel Library" during installation.

GUI CREATION

- ▶ The `'uicontrol'` function can now be overloaded.
- ▶ Now, it is possible to use LaTeX or MathML as label for `uimenu` or `pushbutton` in `uicontrol`. See Bug #7366.
- ▶ **Bug #7082 fixed** - Setting the "enable" property had no effect on "listbox" and "text" uicontrols.
- ▶ **Bug #7364 fixed** - The "Checked" property misworked for `uimenu`s and they could not have a callback.
- ▶ **Bug #7365 fixed** - "delete" applied to a "Checked" `uimenu` destroyed the handle without updating the display.
- ▶ **Bug #7367 fixed** - `uimenu` properties display was not consistent.
- ▶ **Bug #7368 fixed** - Setting the "Visible" property to "off" had no effect.
- ▶ **Bug #7898 fixed** - In a "popupmenu" style `uicontrol`, when the list in the "String" parameter has several repeated values, the returned selected value was always the first value in the list and not the selected one.

WINDOWS INSTALLER

- ▶ Add "Command Line - Minimal Installation (no gui)" Configuration. Interpreter in command line without the graphic, java or Tcl/Tk capabilities. Installation requires only 60 Mo on disk.

SCILAB/LABVIEW GATEWAY

- ▶ **Bug #7791 fixed** - It was not possible to restart anymore. VI already started.

SOURCE REORGANIZATION

- ▶ `'tbx_builder_src'`, `'tbx_build_macros'`, `'tbx_builder_gateway'`, . functions has been moved in `modules_manager` module.

DEMONSTRATIONS

- ▶ **Bug #6947 fixed** - Some demos in "Optimization and Simulation" failed, without write rights in SCI subdirectory.
- ▶ **Bug #7452 fixed** - demos `nmplot` from Optimization and Simulation -> `fminsearch` -> `nmplot*` did not work.
- ▶ **Bug #7514 fixed** - Some demo files were broken due to changes in `x_mdialog` function.
- ▶ **Bug #7620 fixed** - The Optimization and Simulation/Optimisation/Plot demo did not plot anything.
- ▶ **Bug #7685 fixed** - Demo Graphics => More surfaces => Sphere did not appear as spherical.
- ▶ **Bug #7941 fixed** - The demonstration CACSD/PID did not work.
- ▶ **Bug #7988 fixed** - Inverted pendulum demo failed with f2c version on Windows.
- ▶ **Bug #7872 fixed** - Riemann Surface demo returned an error if window was closed by the cross button.
- ▶ **Bug #8068 fixed** - Figures were not all closed at the end of a demonstration.
- ▶ **Bug #8126 fixed** - Some demos from the GUI modules were hanging.
- ▶ **Bug #8240 fixed** - Demo of `polarplot` improved (Thanks to Samuel Gougeon).

REMOVED FUNCTIONS (PREVIOUSLY DECLARED AS OBSOLETE)

- ▶ 'textprint', 'pol2tex' replaced by 'prettyprint'.
- ▶ 'tk_savefile' replaced by 'uigetfile'.
- ▶ 'tk_getdir' replaced by 'uigetdir'.
- ▶ 'tk_choose' replaced by 'x_choose'.
- ▶ 'sci2excel' replaced by 'write_csv'.
- ▶ 'excel2sci' replaced by 'read_csv'.
- ▶ 'x_message_modeless' replaced by 'messagebox'.
- ▶ 'sethomedirectory' replaced by 'SCIHOME'.
- ▶ 'getcwd' replaced by 'pwd'.
- ▶ 'xbasc' replaced by 'clf'.
- ▶ 'getf' replaced by 'exec'.
- ▶ 'NumTokens' replaced by 'tokens'.
- ▶ 'sort' replaced by 'gsort'.
- ▶ 'scilab_demos' replaced by 'demo_gui'.
- ▶ 'with_gtk' replaced by 'getversion'.
- ▶ 'readc_' replaced by 'input'.

KNOWN INCOMPATIBILITIES

- ▶ The graph of the nyquist function (CACSD module) is now symmetric.
- ▶ **The Bug #4583 fix** makes the default element value in string array assignment be an empty string instead of " ".
- ▶ Due to **Bug #7364 fix**, "Checked" uimenus have to be manually managed, these uimenus are no more (un)checked on mouse click. Moreover, they can now have a callback.

MISC

- ▶ 'whos' function updated, variables sorted by name (case insensitive). If a variable is global, a * appears after his type name. (Thanks to Samuel Gougeon).

BUG FIXED

- ▶ **Bug #1041 fixed** - An error inside a loop was reported as if it occurred on the "end" line.
- ▶ **Bug #1304 fixed** - macr2tree now works with a Scilab expression as input.
- ▶ **Bug #1371 fixed** - The representation of floating numbers with and exponent larger than 100 or smaller than -100 was incorrect.
- ▶ **Bug #2076 fixed** - pspect did not use the last data window.
- ▶ **Bug #2613 fixed** - Incorrect stack recovery for caught errors in some specific contexts (for loops, ...).
- ▶ **Bug #2623 fixed** - Non-regression test script fixed.
- ▶ **Bug #2654 partially fixed** - exec returned a wrong error if a line had more than 4096 characters.
- ▶ **Bug #2775 fixed** - Multiplication of 0 times infinity did not work because of ATLAS under Windows.
- ▶ **Bug #3281 fixed** - Incorrect error message #72 fixed.
- ▶ **Bug #3175 fixed** - There were no shortcuts in the console menus.
- ▶ **Bug #3311 fixed** - Loop with a "for" over a vector of complex polynomials produced wrong values.
- ▶ **Bug #3490 fixed** - "resume" inside an exec crashed Scilab, "resume" restrictions of use removed.

- ▶ **Bug #3688 fixed** - The assignment using ":" subscript for a dimension that did not exist, did not work for hypermatrices.
- ▶ **Bug #3780 fixed** - The loadmatfile function did not ignore comments found in ASCII files while loading them, resulting in an error message. For Matlab compatibility, when this function is called with one input argument load(filename), it now looks for a binary file (if filename has no extension or .mat extension) or for an ASCII file if filename has another extension.
- ▶ **Bug #3796 fixed** - In some situation the "tf2ss()" function failed to compute correctly the state space representation of a transfer function.
- ▶ **Bug #3810 fixed** - Insertion in string array and polynomial array may be very slow.
- ▶ **Bug #3842 fixed** - "native" and "double" evaluation modes added to the sum, cumsum, prod and cumprod functions For more information, see the SEP #46.
- ▶ **Bug #3937 fixed** - Buttons size in "x_choices" window was related to the labels one.
- ▶ **Bug #4075 fixed** - A basic uicontrol example crashed Scilab 5.0.3
- ▶ **Bug #4117 fixed** - Via the user interface, closing a graphics figure which had a non-existing event handler attached did not destroy its associated data structure.
- ▶ **Bug #4224 fixed** - uigetfile masks were case insensitive on Windows.
- ▶ **Bug #4247 fixed** - The command xclick did not work correctly.
- ▶ **Bug #4359 fixed** - M(:,:)= 'anything' produced erroneous results.
- ▶ **Bug #4362 fixed** - test_run("gui", "checkbox") no more freezes Scilab.
- ▶ **Bug #4375 fixed** - Interactive test SCI/modules/core/tests/unit_tests/breakpoints.tst failed.
- ▶ **Bug #4493 fixed** - 'rat' moved in elementary_functions module.
- ▶ **Bug #4505 fixed** - A red vertical bar appeared for some continuous time systems.
- ▶ **Bug #4572 fixed** - Scilab did a SIGSEGV after stacksize('max') + stacksize().
- ▶ **Bug #4583 fixed** - Default value for string array assignment was " " instead of an empty string "".
- ▶ **Bug #4625 fixed** - intersci-n was broken on Windows.
- ▶ **Bug #4640 fixed** - plot2d() put CPU utilization at 100% on Windows.
- ▶ **Bug #4672 fixed** - Internal function AddFunctionInTable renamed to getFunctionByName to avoid confusions on the actual usage of this function. Thanks to Yuvraj Tomar.
- ▶ **Bug #4699 fixed** - xml2test.pl: Paths were badly displayed in some cases.
- ▶ **Bug #4738 fixed** - The number of columns in the console was badly calculated.
- ▶ **Bug #4783 fixed** - Comparison between sparse complex matrix and a full one was wrong when the sparse matrix contained a zero row.
- ▶ **Bug #4799 fixed** - Sometimes the bode, nyquist, ... function reported a "non convergence" error
- ▶ **Bug #4827 fixed** - The test_run function did not properly work with modules beginning with a "n".

- ▶ **Bug #4841 fixed** - Functions created by 'getd' were unknown by Scilab.
- ▶ **Bug #4948 fixed** - A simple Runge Kutta method for solving a second order differential equation had a strange behavior.
- ▶ **Bug #4985 fixed** - mgetl did not use fgets (C function).
- ▶ **Bug #4996 fixed** - mgetl() was not located in the right module. It has been moved to "fileio" module.
- ▶ **Bug #5149 fixed** - test_run(): Calls to exec() were no more logged by diary().
- ▶ **Bug #5216 fixed** - URLs are now active in uicontrols of style "text". This feature is used in ATOMS GUI (modules description).
- ▶ **Bug #5324 fixed** - Under Windows, "File open" dialog box focused on parent directory of current directory.
- ▶ **Bug #5432 fixed** - A link to <http://www.tcl.tk/doc/> added in help files about Tcl/Tk.
- ▶ **Bug #5486 fixed** - It was not possible to precise the text of a link in help_from_sci.
- ▶ **Bug #5575 fixed** - Wrong German translation fixed (Standart => Standard).
- ▶ **Bug #5583 fixed** - exec() did not manage correctly UTF-8 and ANSI/ASCII files encoded.
- ▶ **Bug #5588 fixed** - Assigning null() in a tlist or mlist field shifted all remaining values with respect to field names.
- ▶ **Bug #5612 fixed** - There was no way to delete a field in a struct. It is now possible with null().
- ▶ **Bug #5629 fixed** - export_to_hdf5 to a file overwrote a directory with the same name (now trigger an error).
- ▶ **Bug #5630 fixed** - export_to_hdf5 to a file with a same directory name altered the permission of the directory.
- ▶ **Bug #5686 fixed** - Complex number manipulation could crash Scilab.
- ▶ **Bug #5697 fixed** - External hyperlinks were opened in Help Browser rather than in Web Browser.
- ▶ **Bug #5724 fixed** - erfinv and erf missed references to similar functions
- ▶ **Bug #6332 fixed** - stacksize had problems on Mac OS X and 64-bit platforms.
- ▶ **Bug #6349 fixed** - The callback of an 'edit' uicontrol was only executed when it lost focus.
- ▶ **Bug #6419 fixed** - There was no way to retrieve minimum global stack size from Scilab.
- ▶ **Bug #6428 fixed** - fscanfMat did not manage format parameter as fprintfMat.
- ▶ **Bug #6435 fixed** - error 4 returned a wrong message.
- ▶ **Bug #6447 fixed** - unix_g() and dos() did not support properly neither UTF8 nor ANSI encoded output.
- ▶ **Bug #6449 fixed** - regex returned a wrong value with a string returned by mgetl.
- ▶ **Bug #6451 fixed** - length returned a wrong value with a string returned by mgetl.
- ▶ **Bug #6452 fixed** - part returned a wrong value with a string returned by mgetl.
- ▶ **Bug #6484 fixed** - file did not return filename of an opened Fortran file.
- ▶ **Bug #6477 fixed** - in some case, schur returned wrong values on Windows.
- ▶ **Bug #6504 fixed** - Due to a bug in Java, the
 tag was not copied as a CR in a messagebox.
- ▶ **Bug #6504 fixed** - Copy/paste of the contents of message boxes was not available.
- ▶ **Bug #6510 fixed** - modules/helptools/help_en_US.xsl and modules/helptools/help_fr_FR.xsl were useless but not removed.
- ▶ **Bug #6511 fixed** - mseek and mtell did not manage files > 2 Gbytes on 64-bit Windows.
- ▶ **Bug #6514 fixed** - "help %k" and "help %asn" pointed to the symbols help page.
- ▶ **Bug #6516 fixed** - fullfile did not remove blanks and not create a valid path.
- ▶ **Bug #6535 fixed** - The property 'ListboxTop' of the graphic user interface object 'listbox' had no effect.
- ▶ **Bug #6543 fixed** - neldermead issues for automatic restarts.
- ▶ **Bug #6549 fixed** - genlib function had a behavior which was not consistent with the load function.
- ▶ **Bug #6550 fixed** - lib(".") returned a relative path in library variable created.
- ▶ **Bug #6556 fixed** - fprintf() returned an error if it was called twice (or more) on the same file.
- ▶ **Bug #6635 fixed** - Incorrectly drawn Bode plots (calfrq bug).
- ▶ **Bug #6639 fixed** - "hypermat" did not remove the higher dimensions equal to 1.
- ▶ **Bug #6666 fixed** - emptystr() gave a wrong result instead of complaining about hypermatrix.
- ▶ **Bug #6767 fixed** - The "uicontrol" help page said the "Style" property of an uicontrol could be set after creation but it did not.
- ▶ **Bug #6682 fixed** - mprintf, msprintf, mfprintf did not manage octal (%o) format.
- ▶ **Bug #6726 fixed** - Variables whose name starts with a \$ could be retrieved in libraries.
- ▶ **Bug #6740 fixed** - It was not possible to launch Scilab as Minimized or Maximized Window.
- ▶ **Bug #6741 fixed** - Some source files were useless.
- ▶ **Bug #6744 fixed** - p_margin() returned an erroneous result.
- ▶ **Bug #6745 fixed** - g_margin() returned an erroneous result.
- ▶ **Bug #6751 fixed** - Completion added unwanted characters when some string sequences occurred several times.
- ▶ **Bug #6768 fixed** - input did not return good value when RETURN was pressed on Windows XP.
- ▶ **Bug #6774 fixed** - Calling get_param generated a "funcprot" warning when the value of an option stored in a parameters list was a function.
- ▶ **Bug #6781 fixed** - Defined variables in a library were not recognized in compiled macros.
- ▶ **Bug #6783 fixed** - Solving a system of linear equation by backslash ("\") caused a crash, when using complex numbers on Windows.
- ▶ **Bug #6784 fixed** - It was not possible to move a Scilab installation without breaking the (previously installed) ATOMS packages load.
- ▶ **Bug #6827 fixed** - The error printed by spchol if the variable was complex was wrong.
- ▶ **Bug #6830 fixed** - C2F(scistring) in stack2.c was broken for macro names of exactly two characters.

- ▶ **Bug #6831 fixed** - in cli (=nwni) mode, `tbx_build_help` failed.
- ▶ **Bug #6849 fixed** - `add_profiling` badly handled "else" which made `plotprofile` function produced an incorrect report.
- ▶ **Bug #6861 fixed** - `yulewalk` example failed on Windows.
- ▶ **Bug #6864 fixed** - Some error messages were wrong in `data_structures` module.
- ▶ **Bug #6867 fixed** - Wrong error message when `base2dec()` was called with an invalid base representation.
- ▶ **Bug #6889 fixed** - '`fscanfMat`' crashed with wrong formatted files.
- ▶ **Bug #6891 fixed** - '`whos`' did not display global variables.
- ▶ **Bug #6893 fixed** - Some files `+~JF****.tmp` were created outside of Scilab temporary directory.
- ▶ **Bug #6895 fixed** - Completion crashed with -NW mode, on some Linux.
- ▶ **Bug #6901 fixed** - This script with '`exec`' produced a weird warning.
- ▶ **Bug #6923 fixed** - Some localized messages were wrong in '`qmr`'.
- ▶ **Bug #6924 fixed** - Some error messages were wrong in '`gmres`' and '`qmr`'.
- ▶ **Bug #6932 fixed** - Unitary test for function '`exit`' failed in Linux binary version.
- ▶ **Bug #6933 fixed** - Some temporary files (`dict_*.tmp`) were created when using search engine of the help browser.
- ▶ **Bug #6934 fixed** - Denormalized floating point numbers were not present in Scilab's master.
- ▶ **Bug #6938 fixed** - `frexp` returned a wrong error message with a complex as input argument.
- ▶ **Bug #6940 fixed** - An error message was wrong in '`pvm_send`'.
- ▶ **Bug #6942 fixed** - Explicit dependency on the `libX11` on `scilab-cli` was existing.
- ▶ **Bug #6951 fixed** - `stacksize` had a strange behavior.
- ▶ **Bug #6952 fixed** - `stacksize('max')` did not return maximum value.
- ▶ **Bug #6962 fixed** - `bvode` generated an error on Windows.
- ▶ **Bug #6964 fixed** - Scilab could detect a wrong SCI path on Windows.
- ▶ **Bug #6971 fixed** - After launching a module by `loader.sce`, variable `v` was predefined.
- ▶ **Bug #6986 fixed** - `edit('toto.sce')` created a file `toto.sce.sci` containing a function named `toto.sce`
- ▶ **Bug #6990 fixed** - "and" and "or" did not work on hypermatrices.
- ▶ **Bug #7003 fixed** - '`evstr`' did not evaluate NaN and Inf as `%nan` and `%inf`.
- ▶ **Bug #7006 fixed** - `exec` removed spaces at the end of filename when it returned an error.
- ▶ **Bug #7019 fixed** - `resume()` produced an incorrect error message.
- ▶ **Bug #7021 fixed** - Scilab did not start and returned a system error (193) on Windows.
- ▶ **Bug #7033 fixed** - `newfun` was randomly crashing (mostly on 32-bit) writing to unallocated memory.
- ▶ **Bug #7042 fixed** - Insertion of an empty matrix into a struct (to remove a row or column) was buggy when multiple index was used.
- ▶ **Bug #7044 fixed** - calling sequence in help of '`strcat`' was wrong.
- ▶ **Bug #7057 fixed** - `isdigit` and `isalphanum` crashed with a matrix of string as input argument.
- ▶ **Bug #7077 fixed** - `uigetfont` crashed Scilab when the cancel button was clicked.
- ▶ **Bug #7078 fixed** - A wrong error message was displayed when setting the "value" property of an "edit" uicontrol.
- ▶ **Bug #7094 fixed** - If badly called, `ode` made Scilab crashed.
- ▶ **Bug #7095 fixed** - The margins unit `_test` failed.
- ▶ **Bug #7108 fixed** - It was not possible to set the `callback_type` property via uicontrol.
- ▶ **Bug #7109 fixed** - '`lu`' function with some complex matrices crashed on Windows.
- ▶ **Bug #7123 fixed** - No completion was possible if the name of a variable was preceded by `~` or `@` or `<` or `>`
- ▶ **Bug #7124 fixed** - `mputl` returned a wrong error message if a file did not exist.
- ▶ **Bug #7125 fixed** - `fscanfMat()` did not read correctly `%inf`, `-%inf` and `%nan` values respectively recorded by `fprintfMat()`.
- ▶ **Bug #7140 fixed** - Modifying the stack with `gstacksize()` and `stacksize()` is now forbidden in concurrent execution context.
- ▶ **Bug #7161 fixed** - `wavread` failed to load some .wav files with error 44.
- ▶ **Bug #7163 fixed** - Assignment index ":" were translated into "`eye()`".
- ▶ **Bug #7163 fixed** - `tree2code` wrongly replaced every (:) occurrence in a function definition with `eye()`.
- ▶ **Bug #7170 fixed** - Scilab equivalent for Matlab "`uigetdir`" was "`tk_getdir`", it has been replaced by "`uigetdir`".
- ▶ **Bug #7180 fixed** - `xs2pdf` was unable to export a graphic.
- ▶ **Bug #7181 fixed** - The display of a struct having no fields did not work.
- ▶ **Bug #7189 fixed** - In some cases the usage of `resume` led to a crash of Scilab.
- ▶ **Bug #7223 fixed** - '`unsetmenu`' on a separator crashed Scilab.
- ▶ **Bug #7224 fixed** - Export empty matrix in HDF5 did not unlock file.
- ▶ **Bug #7231 fixed** - `mtlb_num2str` did not manage second input argument.
- ▶ **Bug #7236 fixed** - Due to Bug #1371 fix, `sci2exp(-%inf)` returned a wrong value `-nf` and not `-%inf`.
- ▶ **Bug #7250 fixed** - In the console, the first character of a filename was doubled when completed.
- ▶ **Bug #7260 fixed** - To read a malformed .csv file with `fscanfMat` crashed Scilab.
- ▶ **Bug #7278 fixed** - `strsplit` did not work with some particular inputs.
- ▶ **Bug #7282 fixed** - `eval` failed on some functions without output arguments.

- ▶ **Bug #7285 fixed** - Open/Save dialog box did not display filenames without extension with filter "*"*.**"
- ▶ **Bug #7286 fixed** - On some platforms, eps export of NaN values was buggy.
- ▶ **Bug #7291 fixed** - unix("") and dos("") returned a wrong message on Windows.
- ▶ **Bug #7312 fixed** - isnum() displayed warnings when using some unusual parameters.
- ▶ **Bug #7348 fixed** - ATOMS: A module was loaded twice if it was installed both in the "user" and the "allusers" section.
- ▶ **Bug #7369 fixed** - fun2string produced incorrect code for parenthesis exponentiation expressions.
- ▶ **Bug #7374 fixed** - If Scilab was launched via another Scilab, TMPDIR was badly built.
- ▶ **Bug #7388 fixed** - A java exception was thrown when we clicked on a menu created using uimenu because this menu had no child.
- ▶ **Bug #7405 fixed** - The toolbar was not updated when an undocking occurred.
- ▶ **Bug #7432 fixed** - fscanfMat and fprintfMat accepted wrong format.
- ▶ **Bug #7443 fixed** - The number of arguments of the "title", "xlabel", "ylabel" and "zlabel" macros were incorrectly checked.
- ▶ **Bug #7453 fixed** - newfun() was broken after clearfun().
- ▶ **Bug #7457 fixed** - Under GNU/Linux and Mac OS, the datatip mode icon was missing in the graphic windows toolbar.
- ▶ **Bug #7485 fixed** - Division of matrices of complex numbers crashed on Windows.
- ▶ **Bug #7505 fixed** - Last optional parameter of "legend" macros was not read.
- ▶ **Bug #7507 fixed** - There were some issues in the pvm module error messages which made translation difficult.
- ▶ **Bug #7508 fixed** - There was a wrong error message in gmres function.
- ▶ **Bug #7525 fixed** - Scilab failed to assign 2-d matrices into 3-d matrices, on Windows.
- ▶ **Bug #7566 fixed** - The cacsd module graphic functions (bode, black, nyquist,...) did not preserve the immediate_drawing property value.
- ▶ **Bug #7566 fixed** - The handling of immediate_drawing had been broken in zgrid by bug 6395 fix in 5.3.0-beta-4 version
- ▶ **Bug #7568 fixed** - In the completion window, an exception was thrown when an item was selected.
- ▶ **Bug #7569 fixed** - The number of accurate digits during inversion of cdfbet, cdfgam, cdfbin, cdfchi, cdfchin, cdff, cdffnc, cdfnbn, cdfpoi was only 8. Changed to 13.
- ▶ **Bug #7594 fixed** - Undefined variable error was not properly handled since Bug #6781 fix.
- ▶ **Bug #7599 fixed** - Intersci-n and intersci did not create code from a .desc file if it was not ended by an empty line.
- ▶ **Bug #7603 fixed** - Fortran code generated by intersci did not build with a fortran or F2C compiler on Windows.
- ▶ **Bug #7611 fixed** - The cross to close a subwindow and the little arrow to undock were not visible even if the subwindow was docked.
- ▶ **Bug #7615 fixed** - When opening a SuperBlock, a non-blocking exception could be thrown.
- ▶ **Bug #7616 fixed** - fullfile did not work with only one input argument.
- ▶ **Bug #7619 fixed** - get_function_path did not return all available paths.
- ▶ **Bug #7640 fixed** - xs2pdf, xs2eps, xs2emf crashed if filename prefix had less of three characters.
- ▶ **Bug #7681 fixed** - help_from_sci failed to process tabulated .sci files.
- ▶ **Bug #7688 fixed** - set("color_map", hsvcolormap(128)) produced a EXCEPTION_STACK_OVERFLOW.Bbug 7693 fixed - With a corrupted palettes.xml file, the error message was not coherent with the recovering action.
- ▶ **Bug #7694 fixed** - There were no key shortcuts in the command history browser.
- ▶ **Bug #7695 fixed** - Only the first selected line was deleted in command history browser.
- ▶ **Bug #7727 fixed** - The help page of sp2adj was not correct. Improved the help page of adj2sp. Added unit tests for sp2adj and adj2sp. Improved implementation by checking the input arguments.
- ▶ **Bug #7733 fixed** - strstr crashed Scilab if the second input argument was longer than the first one.
- ▶ **Bug #7737 fixed** - Part 1 - ATOMS: when installing a module, the archive was automatically downloaded before checking if the archive already existed in the archive directory.
- ▶ **Bug #7740 fixed** - edit() with a Scilab macro redefined failed.
- ▶ **Bug #7747 fixed** - xclick(): When the graphic window was docked, keyboard events were not detected.
- ▶ **Bug #7751 fixed** - justify() did not work correctly if the subject embedded leading or trailing spaces.
- ▶ **Bug #7754 fixed** - umfpack did not work with Scilab 5.3.0-beta-2 on Windows.
- ▶ **Bug #7756 fixed** - sprand did not produce normal numbers.
- ▶ **Bug #7766 fixed** - cdff, cdffnc functions did not display %inf in error messages.
- ▶ **Bug #7768 fixed** - For cdfgam, the Scale parameter was, in fact, the Rate.
- ▶ **Bug #7775 fixed** - ged action 6 (selection and move of a graphic entity) was broken.
- ▶ **Bug #7802 fixed** - the graduate function complained about obsolete maxi and mini functions.
- ▶ **Bug #7803 fixed** - edit edit failed.
- ▶ **Bug #7805 fixed** - clear called inside an exec while in pause could have unexpected results.
- ▶ **Bug #7806 fixed** - [a, b] = dos("git 1>&2") returned a wrong error.
- ▶ **Bug #7821 fixed** - In a messagebox, an exception was thrown when clicking on mal-formed url.
- ▶ **Bug #7831 fixed** - Some reference of the old editvar UI were present in the source directory tree.
- ▶ **Bug #7840 fixed** - big lines were splitted by mgetl.
- ▶ **Bug #7849 fixed** - eqfir / remez functions crashed under MacOSX due to a lapack bug on slamch function.
- ▶ **Bug #7862 fixed** - "savematfile" only saved the first string in the vector (or matrix) when variable was a vector (or matrix) of strings.
- ▶ **Bug #7897 fixed** - configure failed under FreeBSD (bashim)

- ▶ **Bug #7900 fixed** - inserting a rational in a rational hypermatrix generated invalid rationals entries (with zero denominators)
- ▶ **Bug #7908 fixed** - The number of values modified by `scicos_getvalues` could not be more than 20. This value has been updated to 30 variables.
- ▶ **Bug #7924 fixed** - `pathconvert` failed conversion to `cygwin` format.
- ▶ **Bug #7943 fixed** - On a GNU/Linux binary version, it was not possible to use the `fortran_block` block.
- ▶ **Bug #7946 fixed** - `error(0, "bye")` crashed Scilab.
- ▶ **Bug #7950 fixed** - `spec` crashed on Windows.
- ▶ **Bug #7951 fixed** - `strcat` crashed with the row concatenation option on GNU/Linux.
- ▶ **Bug #7952 fixed** - `libraryinfo` did not check size of the input argument.
- ▶ **Bug #7959 fixed** - `fscanf` did not manage file descriptor as input argument.
- ▶ **Bug #7964 fixed** - `errclear(2)` cleared all errors and not only error 2 as written in help.
- ▶ **Bug #7970 fixed** - The eager loading of `openmp` support library was crashing on Linux with unsupported configuration for `openmp`.
- ▶ **Bug #7974 fixed** - Customized `xerbla.f` subroutine did not return enough information.
- ▶ **Bug #7981 fixed** - `copyfile` failed with localized filenames on GNU/Linux.
- ▶ **Bug #7994 fixed** - `xs2emf` created empty files on Windows.
- ▶ **Bug #7997 fixed** - `getfreememory` function adapted for FreeBSD. Thanks to Rob Farmer.
- ▶ **Bug #8006 fixed** - `mgetl` produced a memory allocation error.
- ▶ **Bug #8016 fixed** - An error in a german translation gave an error message.
- ▶ **Bug #8032 fixed** - `cdfnror` was able to fail silently.
- ▶ **Bug #8046 fixed** - `msprintf` did not manage tabulation as format.
- ▶ **Bug #8055 fixed** - `lines()` was wrongly updated when the console had the focus back.
- ▶ **Bug #8067 fixed** - Nyquist unitary test failed due to a change of the `nyquist` function. The graph has been symetrized.
- ▶ **Bug #8077 fixed** - `browsevar`, `scinotes`, `xcos` functions were not disabled in `scilab-cli / -nwni` mode on Linux and MacOS X.
- ▶ **Bug #8079 fixed** - When the max number of variable available has been reached, it was not possible to leave Scilab.
- ▶ **Bug #8087 fixed** - `prettyprint` did not handle `%inf` and `%nan`.
- ▶ **Bug #8091 fixed** - Scilab was unable to find fortran compiler under MacOSX.
- ▶ **Bug #8107 fixed** - `sum(a,1)`, `cumsum(a,1)`, .. made Scilab 5.0.3-beta-4 crash in some particular context.
- ▶ **Bug #8108 fixed** - ATOMS: Modules that start by the letter "n" were not wellmanaged by ATOMS. The cause of the issue is the behaviour of the `msprintf` function, which considers "\n" in file paths as a new line insertion.
- ▶ **Bug #8110 fixed** - ATOMS: When removing a module, its main directory was not deleted even if it was empty.
- ▶ **Bug #8124 fixed** - Some translations were not up to date.
- ▶ **Bug #8128 fixed** - A warning was displayed on 'Save' action in a graphic window.
- ▶ **Bug #8129 fixed** - The error message was not cleared in `tbx_builder_src` if you did not have a compiler.
- ▶ **Bug #8134 fixed** - The font attributes (FontName, FontSize, FontWeight) were not taken into account for "text" uicontrols.
- ▶ **Bug #8148 fixed** - `fscanfMat` did not read matrix file with tabulation as default separator.
- ▶ **Bug #8154 fixed** - It was not possible to cancel a messagebox with ESC key.
- ▶ **Bug #8160 fixed** - The derivative function did not check for input argument #1, if it was a list.
- ▶ **Bug #8170 fixed** - Loading HDF5 files in non-Scilab format caused crash of application.
- ▶ **Bug #8174 fixed** - `ss2tf` produced bad results if applied to a complex state space system.
- ▶ **Bug #8175 fixed** - roots function did not converge under MacOSX due to a Lapack bug on `slamch` function.
- ▶ **Bug #8177 fixed** - Format mode was modified by some macros and not restored.
- ▶ **Bug #8181 fixed** - uicontrol did not handle color where components were outside the range 0-255.
- ▶ **Bug #8202 fixed** - Typo in the localization.
- ▶ **Bug #8206 fixed** - `isnum` did not manage blanks.
- ▶ **Bug #8208 fixed** - Error in creating the temporary directory in function `createScilabTMPDIR`.
- ▶ **Bug #8218 fixed** - File association with filename with accented characters did not work.
- ▶ **Bug #8232 fixed** - Drag and drop of `.scg` files (on console) used "xload" and not "load".
- ▶ **Bugs #8257, #8258 fixed** - `fscanfMat` did not read matrix file not formatted by `fprintfMat`.
- ▶ **Bug #8254 fixed** - The `nearfloat` function did not work properly for near denormalized numbers.
- ▶ **Bug #8279 fixed** - `error(144)` returned a unexpected message.
- ▶ **Bug #8283 fixed** - File `graphics/help/en_US/datatips.datatipLookfor.xml` removed. `datatipLookfor` is an internal function that has not be used directly.
- ▶ **Bug #8296 fixed** - `size(M,3)` crashed scilab 5.3.0-beta-4.
- ▶ **Bug #8300 fixed** - `a(48400, 48400) = 0` crashed scilab.
- ▶ **Bug #8321 fixed** - In some cases, `configure_msvc` failed and returned a wrong error message.
- ▶ **Bug #8332 fixed** - Some use of clipboard function crashed Scilab.
- ▶ **Bug #8390 fixed** - a "Warning : redefining function: mputl" displayed if you did not install `fftw` on Windows.
- ▶ **Bug #8412 fixed** - `find` returned incorrect values with big vector.
- ▶ **Bug #8413 fixed** - `fscanfMat` crashed when file included text lines at the beginning.
- ▶ **Bug #8448 fixed** - 'whereis' function with a string as input argument did not work with ATOMS functions.
- ▶ **Bug #8459 fixed** - `strsplit` failed when second input argument was a "/"
- ▶ **Bug #8462 fixed** - `bvodeS` crashed on Windows and did not return a error.

- ▶ **Bug #8468 fixed** - size with 2 input arguments did not work for hypermatrices.
- ▶ **Bug #8475 fixed** - It was impossible to get the data of an entity through the graphic editor.
- ▶ **Bug #8481 fixed** - Scilab crashed when display a rational containing a complex.
- ▶ **Bug #8505 fixed** - help was not generated on Windows, if there was a path name with some spaces.
- ▶ **Bug #8528 fixed** - length returned a wrong size for malformed characters.
- ▶ **Bug #8531 fixed** - "edit" function failed to open a defined macro loaded on stack.
- ▶ **Bug #8532 fixed** - size of input arguments of read_csv was not verified.
- ▶ **Bug #8540 fixed** - Fix a typo in Xcos.
- ▶ **Bug #8582 fixed** - Under Linux & Mac OS the waitbar window was too small and we could not see the bar inside it.
- ▶ **Bug #8587 fixed** - readNamedMatrixOfDouble (readCommonNamedMatrixOfDouble) returned wrong values.