Release Notes

SpinRCP

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SpinRCP Version 3.1.1 – 27 October 2020

‒   SpinRCP application of version 3.1.0 or lower freezes after startup if macOS uses a higher version of Java than 8u151. The cause is a bug in the org.eclipse.swt.cocoa.macosx.x86_64_3.103.2.v20150203-1351.jar plug-in provided by Eclipse.com for 64-bit macOS platforms. In SpinRCP Version 3.1.1, a newer bug-free plug-in is used. With this change, SpinRCP3.1.1 on macOS works with all versions of Java 8 but no longer works with Java version 6 and version 7. In contrast, older versions of SpinRCP on macOS 64-bit work with all versions of Java 6 and Java 7, but with Java 8 only up to and including version 8u151.

‒   From this version onwards, there is a SpinRCP.ini file in the SpinRCP home folder on all platforms. This file already existed on macOS in the previous versions for passing some arguments directly to the Java virtual machine (JVM) using the -vmargs command line argument. In Windows and Linux distributions of SpinRCP Version 3.1.1, SpinRCP.ini comes as an empty file. In this file's first line, a user must write the -vm option and, in the second line, an absolute path to the selected Java virtual machine. The -vm option and its value (the path) must be on separate lines and written without any space or Tab at the beginning of a line. Specifying a JVM for SpinRCP to run on ensures that SpinRCP will run on this specific JVM, regardless of the system's default JVM.

‒   SpinRCP checks whether the entered path to a C compiler is valid. Due to an error in parsing a C compiler's response to a test command on the macOS 10.15 Catalina platform, SpinRCP did not accept the set path, even though it was entered correctly. This bug has been fixed now.

‒   Thanks to Hakan Erdogmus, an error was found in generating automata when rendezvous communication appears in the guard of an escape clause of a Promela unless statement. Rendezvous communication is incompatible with partial order reduction. Since the partial order reduction is used by default during the compilation of a verifier source C file, the pan verifier outputs the warning message before generating the state tables in the format accepted by the dot tool. Therefore, the file contains the warning message before the generated state tables, and the dot generates an error message because it cannot render the erroneously composed dot file. When the pan is used to generate the dot file for viewing automata of the Promela processes and never claims in Automata View, we do not need partial order reduction. The bug in Automata View was solved just by adding a -DNOREDUCE compile-time option. The same compile-time option was added in compilation for the State Tables command, too, since the same warning message disabled the state tables' pretty-printing in the Console window.

‒   The SpinRCP website has been thoroughly updated. Instructions for downloading and installing SpinRCP for Windows, Linux, and macOS platforms are now written in much more detail. Two new references have been added, and two broken links to electronic versions of publications have been corrected. An obsolete frequently asked question has been removed and the actual ones added.

The Macintosh operating system's obsolete Mac OS X name has been replaced with the current macOS name.

— A new feature of matching bracket highlighting has been introduced in Promela Editor. This feature facilitates the work with brackets. Positioning the cursor immediately after a bracket will highlight the corresponding closing or opening bracket by drawing a small standing rectangle around it. Matching bracket highlighting is supported for the round, curly, and square brackets. A description of this new feature has been included in the SpinRCP's Help menu and on the web site.

— File extension .fig has been removed from the available Automata View file formats because it is rarely used. However, eight other graphic formats are still available.

— Minor improvements have been made to the Automata View user interface in the event of errors in creating automata files or viewing their graphs.

— The main entrance of the Faculty of Electrical Engineering and Computer Science and thus its postal address was changed from Smetanova ulica 17 to Koroška cesta 46, so this change is reflected on the website and the product's splash screen.

SpinRCP Version 3.1.0 – 30 December 2016

— In the SpinRCP Version 3.0.0, the way of pan invocation has been changed. Unfortunately, a redundant space character at the beginning of the string containing the run-time parameters has been overlooked. Under the Windows operating system, this »tiny« bug does not disturb the correct functioning of SpinRCP, but under other operating systems, it does. The consequence of this bug is that SpinRCP Version 3.0.0 uses the default options and parameters for the pan verifier and ignores any parameter and/or option given by a user. This bug is present only in SpinRCP Version 3.0.0. It has been fixed now.

— All previous SpinRCP versions compose the Spin command for guided simulation by using the -k option followed by an execution trail filename. However, the old Spin versions before Spin Version 5.2.3 do not have this option yet. Instead of that, the trail file is specified by the -tN option, where N represents the trail number. Therefore, the guided simulation within previous SpinRCP versions by using Spin versions older than 5.2.3 is not feasible. This bug has been fixed. SpinRCP Version 3.1.0 checks which Spin version is used. For older versions, it inserts -t or -tN option in the guided simulation command. Otherwise, it inserts -k fname, where fname is the execution trail filename.

— In the previous SpinRCP versions, a random simulation with a huge number of lines written to the console could stop according to the bug in the code that handled the Spin message "spin: type return to proceed" that asks a user to press Enter to continue the random simulation. This bug has been fixed.

– In the previous SpinRCP versions, a bug in the code for handling the creation of virtual processes has been disclosed. An error in the regular expression caused that if the last given process in the list of processes to be joined into a virtual process is identified with more than one character, the creation of a virtual process fails. This bug has been fixed. Also, regular expressions have been supplemented in such a way that underlines ("_") may be used in the names of virtual processes and the renamed channels.

– In the Advanced Options tag of the Verification preference page, the doubled -G extra run-time option has been removed as well as the redundant option -wN because its value is automatically calculated from the parameter Estimated state space size. A tooltip help has been added in the top five text fields of this tag to hint a user the meanings of the advanced verification parameters.

– In the Hash-compact storage mode, the compiler directives -DCOLLAPSE and/or -DMA have been disabled.

– The operation of Run and Stop buttons in the Simulation/Replay view has been slightly changed. From now on, when a user clicks the Stop button, the current contents in Variable values and Queue contents values tables are not cleared until clicking the Run button or the first click on either Message Step or Single Step button.

– From this version onwards, SpinRCP cleans all pan files after completion of the Syntax Check and State Tables command as well as during Automata View command execution when all automata view output files have already been generated and are no longer needed. Only the Verification command keeps these files because the future SpinRCP versions might support to re-run or re-compile and re-run the verifier by using different options and parameters.

– From this version onwards, statement merging in the verifier is turned off by default (Spin option -o3) in commands Automata View and State Tables. In Syntax Check, statement merging is always turned on (no -o3 option). In the Verification command, statement merging is turned on by default. It may be turned off by selecting -o3 option in the Extra verifier generation options drop-down field in the Advanced Options tag of the Verification preference page.

– In the previous SpinRCP versions, the small window called Select the automaton to view always opens at the top-left corner of the screen when a user selects the Automata View command. The user can move the window to another location on the screen, but SpinRCP does not remember it. From this version onwards, SpinRCP opens this window at the last remembered location.

– Several minor user interface improvements, changes in SpinRCP's log messages to the console, and language corrections have been made.

– The Help contents have been updated and corrected where needed.

–   SpinRCP Version 3.1.0 has been created within the Eclipse Luna Service Release 2 (4.4.2).

SpinRCP Version 3.0.0 – 30 December 2015

–   In the SpinRCP Version 2.3.0, the program did not start if the path to spin had not been previously set in the PATH environment system variable. This bug has been fixed now.

–   From SpinRCP Version 2.2.0 onwards, st2msc is fully integrated within SpinRCP. The file dialog for setting the path to st2msc in the Spin preference page has been removed in SpinRCP Version 2.2.0, but the file dialog for setting the path to Java, which has also become unnecessary, remained there until SpinRCP Version 2.3.0. In this version, it has finally been removed.

–   In the file dialogs for setting the paths to external tools in the Spin preference page on non-Windows platforms, the *.exe file type filter is removed.

–   SpinRCP no longer double-quotes paths with spaces but still handles them correctly.

–   After launching the product, the Workspace Launcher dialog appears and prompts for what workspace to use for this session from this version onwards. A workspace is a folder where SpinRCP stores user's projects. According to a platform, a default workspace is set in your home directory. For example, the default workspace locations for the user with username Zmago are as follows:

C:\Users\Zmago\SpinRCP\workspace under Windows,
/home/Zmago/SpinRCP/workspace under Linux, and
/home/Zmago/Documents/SpinRCP/workspace under macOS.

After clicking the OK button, the chosen workspace with the default SpinRCP perspective opens. The current workspace can be switched by using the new File > Switched Workspace command. If you have already created more workspaces, up to 5 previous workspaces will be available for selection. By clicking the Other... command, the Workspace Launcher dialog opens. The dialog will allow you to browse for or manually enter a new workspace location.

When you switch your workspace, you can select settings that will be transferred to the new workspace. SpinRCP supplies transfers for the workspace layout (opened views, their size, and selected perspectives) and the working sets (the user-defined working sets).

–   In the file dialogs for export and import of the verification profile in the Verification preference page, the default path is set to the current workspace.

In the file dialogs for selecting a file name containing the 1-line LTL formula and never claim, respectively, the default path is set to the parent folder of the

currently selected model. The same default path is set in the file dialogs for Export to MSC and Import Trail commands as well as on the Spin trail to MSC view for selecting a file name for the Spin simulation trail file and MSC file, respectively.

–   The user no longer needs to manually check/uncheck several checkboxes on the General preference page to set the most appropriate user interface. The following selections that are different from Eclipse defaults are set as defaults in SpinRCP programmatically: show line numbers in text editors, refresh workspace using native hooks or polling, don't allow in-place system editors, and show heap status. The latter option displays an indicator showing information about current Java heap usage.

–   During the creation of the first project after installation of SpinRCP, the small Confirm Enablement window, which should be confirmed by pressing the OK button in previous versions, no longer appears. The activities are now enabled automatically.

–   The formats of displaying date and time in the Console Title bar and next to the verification profile file name on the Verification preference page have been unified (e.g., they are now displayed as follows: Dec 30 2015 at 23:44:22 CET). The text "created on" has been added before the date and time of the verification profile file name to make clear that they denote the very moment of the verification profile creation.

–   All long-running operations that open the Progress Information dialog (Syntax Check, Verification, Automata View, State Tables, and Spin Trail to MSC (Read and Convert)) may be canceled by clicking the Cancel button. The text that the running operation is canceled is written to the console.

–   On the Menu Bar Help drop-down menu, the About SpinRCP command has been moved to the menu's last position.

–   Double-clicks on different files of type out in the Model Navigator display each MSC in a separate MSC Viewer. Re-running simulation or replay on the same model reuse (redraw the contents of) the open MSC Viewer.

–   A State Tables command has been added to the Menu Bar Run commands and to the Tool Bar commands. After clicking on its icon, the State Tables preference page opens, where a user can select, which version of the verifier state tables should be displayed: the original one (obtained by using pan option -d -d -d -d), two intermediate ones (option -d -d -d or -d -d), or the final, optimal one (using option -d). The last version is the default. In addition, statement merging may be turned off (by using spin option -o3) or not. By default, statement merging is not turned off. After clicking the OK button, the Spin verifier is generated, then compiled, and then the pan is run for producing state tables for each proctype and each never claim in the model.

The Spin output is post-processed, and the most useful information is pretty-printed on the Console. The following information is contained in each state table: the source and target state of the transition (From State and To State), the transition ID, the transition type (A=atomic, D=d_step, L=local, G=global), source-state labels (p=progress, e=end, a=accept), the line number and the statement in the Promela model source file causing the transition.

– The Simulation Run buttons from the previous versions of SpinRCP have been substituted with the Simulation/Replay buttons Run, Stop, Message Step, and Single Step.

By clicking the Run button, the simulation starts and continues without stopping till the end or till the click on the Stop button. During the simulation run, the replay buttons Message Step and Single Step are being disabled. They become enabled again when the simulation ends or is stopped.

By clicking the Single Step button, a user can replay the simulation run step by step through Promela model statements. On the other side, by clicking the Message Step button, MSC is being drawn message by message (if any message is sent and received in the model at all) and process by process (each time a new process has been created). Message by message and step by step simulation replay can be combined. For example, by successive clicking the Message Step button, a user could come to the interesting part of the simulation trace and then replay it in detail by clicking the Single Step button and finally use the Message Step button again. The simulation run and the replay can be stopped with a click on the Stop button.

– The appearance of all preference pages has been unified. The preference pages that open before carrying out the Simulation, Verification, Automata View, and the newly introduced State Tables command display their titles in the upper-left corner and at the top of the window.

– On the Automata View preference page, the options for bmp and tif file formats have been removed since Graphviz dot does not support these formats under Linux. On the other side, the option for selecting the uncompressed vector graphic format svg has been added. Thus, on all platforms (Windows, Linux, macOS), the same nine graphic formats for displaying automata are now available.

The Statement merging group has also been added where the user can select whether statement merging should be turned off (using verifier generation option -o3). By default, statement merging is not turned off.

– On the MSC Viewer preference page, the default MSC refresh interval has been shortened from 50 to 5 milliseconds and the minimal from 5 to 1 millisecond.

Besides, the redundant Show message parameters in the MSC Viewer graph option has been removed since there is a complementary option called Hide message parameters in the Simulation/Replay View.

The texts, representing the exchange of messages between two processes, no longer start in the middle of the two communicating processes but are now displayed centered on the processes.

In the MSC Viewer and the Simulation/Replay View, the terms "Message" and "Parameter" have been changed to "Channel name" and "Message pars"/"Message parameters", respectively.

–   On the Promela Editor preference page, the Enable colors option is removed as redundant since the syntax coloring is always enabled.

–   The Simulation preference page has been somewhat restructured, and some new functionalities have been added. In the previous versions of SpinRCP, it was possible to set the seed value for the random simulation, but it was impossible to let the Spin select it randomly for each run. In SpinRCP Version 3.0.0, this bug has been fixed by introducing the Set the seed checkbox. If it is checked, the seed value can be entered or selected in the corresponding text field. Otherwise, the seed value is randomly chosen by Spin. In either case, the used seed value can be printed on the console at the end of the random simulation if the newly introduced checkbox Print seed value is checked.

A new Output Filtering group has been introduced with five checkboxes for selecting simulation output filters (Track global variables, Track local variables, Very verbose tracking of variables, Suppress details at the end of the simulation, and Suppress print statements in simulation).

A new Advanced Simulation Options group has also been introduced. In any simulation mode, the following Spin options can be selected or entered in the Extra spin options combined drop-down list and text field: -C, -Dyyy, -d, -e, -l, -J, -L, -qN, -V.

When guided simulation mode is selected, a user can choose to use pan instead of Spin to simulate the model containing embedded C-code. In this case, pan will read and execute the trail found previously during the verification run. The following run-time options can be selected or entered in the Pan execute trail options combined drop-down list and text field: -n, -r, -rN, -C, -r –PN, -g, -S, -v. The default pan option to execute trail is -r. Displaying of MSCs is possible only by using the -g option.

–   The Verification preference page has been somewhat restructured and changed, and some new functionalities have been added.

In the Basic Options tab, the Apply never claim option has been moved from the Correctness properties group to the Never Claim Specification Using group. If this option is selected, then the four options for never claim specification are enabled,

otherwise not. The group Search Mode has been renamed to the Storage Mode. For the Exhaustive storage mode, the checkboxes for two lossless compression methods (Minimized automata and Collapse compression) have been added. A Full Queue group has been moved to the Advanced Options tab.

Many changes have been made in the Advanced Options tab. The following Extra verifier generation options have been added: -Dyyy, -O, and -o7. The Extra compile-time directives -DMA=N and -DNOREDUCE have been removed. The -DNOREDUCE directive was redundant because it is added programmatically when Use partial order reduction option is not selected. From this version of SpinRCP onwards, the -DMA=N directive can be added by selecting the new minimized automata storage mode on the Basic Options tag. For this storage mode, the Size for the minimized automaton text field has been added. The following Extra compile-time directives have been added: -DBFS_DISK, -DBFS_PAR, -DCHECK, -DL_BOUND=N, -DMURMUR, -DNSUCC, -DP_REVERSE, -DPERMUTED, -DRHASH, -DT_REVERSE, and -DVERBOSE. The directive -DHC, which is added when the hash compact storage mode is selected, has been renamed to -DHC4. The following Extra run-time options have been removed: -A, -C, -g, -PN, -r, -rN, and –S. The -A option was redundant because it is added programmatically when the Assertion violations option is not selected. The other removed Extra run-time options have been moved to the Pan execute trail options on the Simulation preference page. The following Extra run-time options have been added: -hash, -i_reverse, -p_randrot, -p_permute, -p_reverse, -p_rotateN, -RSn, -rhash, -t_reverse. The Type of Run group has been renamed to the Search Mode. Options Add complexity profiling and Compute variable ranges have been moved to the Error Trapping group. The option Use compression in the previous Type of Run group has been removed because it had been substituted with the Collapse compression in the Basic Options tag. Two radio buttons have been introduced in the Search Mode group for choosing between depth-first and breadth-first search. In each search mode, the use of partial order reduction can be either selected or deselected. Two options are possible in a depth-first search – the Iterative search for a short trail (this option has been transferred here from the Error trapping group) and a new Bounded context switching option together with a bound number parameter.

A new tab called Iterative/Swarm Runs has been added to the Verification preference page. It can be used to apply iterative sequential or swarm parallel runs of a pan verifier if the bitstate hashing storage mode is selected and the Apply iterative/swarm search refinement (-w18...-w35) checkbox is checked. If the verification process uses other storage modes, exhaustive or hash-compact, all buttons, labels, and text fields on this tag are disabled. Iterative or swarm runs are possible only if you use Spin Version 6.4.0 or later. In this case, the verifier generation, compilation, and sequential/parallel runs of pan are achieved using spin run-time option -biterate or -swarmN,M. If the parallel runs are selected, the text fields for the parameters N (number of parallel runs) and M (hashtable size is

incremented every M runs) become enabled and can be set. The default values of N and M are 10 and 1, respectively. All other verifier generation options, compile-time directives, and run-time options, specified anywhere on the Verification preference page, are also considered.

– In the Spin Trail to MSC view, a new column titled "Message" has been added to the Message list. The previous title "Message name" has been substituted with "Channel ID".

– All Help contents in the Main menu Help drop-down menu have been updated for SpinRCP Version 3.0.0. The help text includes links to the SpinRCP's keywords, described elsewhere in Help. Some broken links in the Help of the previous versions have been corrected.

   Descriptions of all preference pages related to Spin have been moved from the top Help folder called Preference pages one level down to Spin's subfolder.

– Code robustness has been improved, especially in those parts where some problems had been disclosed: checking Promela model syntax, testing the correctness of entered or selected paths to external tools in the Spin preference page, and opening the generated files of automata in graphical format with external viewers on some platforms.

– Other minor code cleanups and more small changes to the user interface have been done as well.

SpinRCP Version 2.3.0 – 15 June 2014

– In the Main menu Help drop-down menu, all the missing Help contents have been completed, and the previously existing ones somewhere corrected.
– Due to the significant code improvement in the MSC parser, the speeds of executions have been drastically improved for all three types of simulation, Export to MSC, Import Trail (as well as a double-click on a file of type .out, which displays an MSC in the MSC Viewer), and st2msc operations.
– From this version onwards, the simulation step counter in the Simulation View no longer counts the steps during the execution of Export to MSC and Import Trail operations, and during loading a simulation trail file of type .out in the MSC Viewer after the file had been double-clicked.
– The outlook of a Spin Trail to MSC View has been changed. From now on, the Process and Message list tables are located in parallel below the Options parameter group.
– In the previous SpinRCP releases, the editor actions Undo, Redo, Cut, Copy, Paste, Delete, and Find/Replace were accessible only by selecting them using the mouse in the Main menu Edit drop-down menu. From this version onwards, they can also be accessed by using the control keys Ctrl+Z, Ctrl+Y, Ctrl+X, Ctrl+C, Ctrl+V, Delete, and Ctrl+F.

- Spin versions 6.2.4, 6.2.5, 6.2.6, and 6.2.7 didn't accept the –DNOFAIR compile-time option for the pan sources. To avoid the Spin error messages, the previous SpinRCP versions deliberately abandoned the use of the -DNOFAIR directive, even though it could improve the verifier's performance. In the Spin Version 6.3.0, the error has been corrected, and the –DNOFAIR directive can again be used. From this version of SpinRCP onwards, the –DNOFAIR directive has been inserted back again if any Spin version except for those four mentioned above is used and a liveness property is being checked without the weak fairness option.
- In the Multi-page Editor the default file name *.pml has been given for a new Promela file to be generated. A user replaces the '*' character with the actual name.
- From this version onwards, if a user cancels the Import Trail file dialog, the output text "Import canceled." is written to the console, and the "MSC Document" title with the empty "Scenario" rectangle will no longer be displayed.
- From this version onwards, if a user cancels the Export to MSC file dialog, the output text "Export canceled." is written to the console.
- To also support lower resolution monitors, three 8-bit Windows application launcher icons (16x16, 32x32, and 48x48) have been added to four 32-bit icons.
- The About Dialog image file type has been changed from .bmp to .png.
- In the Main menu Help drop-down menu, the About SpinRCP option has been separated from the others with the separators and its position being changed.

SpinRCP Version 2.2.0 – 28 April 2014

- In the previous SpinRCP releases, the Java application st2msc, which translates the Spin output simulation trail to the standardized MSC text file, was called from the SpinRCP as an external tool and the path in the file system to the st2msc.jar file had to be set. From this version onwards, st2msc is fully integrated within SpinRCP. Therefore, the file dialog for setting the path to st2msc in the Spin preference page has been removed.
- All SpinRCP functionalities now also work for projects allocated anywhere in a file system outside the default Workspace. In the Model Navigator, you can have models in an arbitrary tree structure, wherein some may be located outside and others inside the default Workspace. The default Workspace for macOS and Linux platforms is set to $HOME/Documents/SpinRCP and $HOME/SpinRCP, respectively.
- To avoid the need for Java upgrades for those users who still use JavaSE-1.6, we set the minimum execution environments required to run the SpinRCP to JavaSE-1.6. All previous versions of SpinRCP required, at least, JavaSE-1.7.
- The Stop label for closing the Simulation View has been renamed to Close to avoid ambiguity due to the same-named button in the Simulation View. From now on, the Simulation/Stop button and labels will only be enabled if any model or the MSC Viewer is selected.

- Other small fixes and code improvements have been made for the Simulation, Automata View, Export MSC, Import trail actions, and the Preference pages.
- This version of SpinRCP has been publicly released for the following platforms: Windows 32 bit (win32/x86), Windows 64 bit (win32/x86_64), Linux 32 bit (gtk/x86), Linux 64 bit (gtk/x86_64), macOS 32 bit (cocoa/x86), and macOS 64 bit (cocoa/x86_64). The preliminary Windows version has been released already on April 16, 2014.

SpinRCP Version 2.1.0 – 10 November 2013

- The Eclipse IDE for SpinRCP development has been updated to Eclipse Kepler 4.3.1.
- The new Eclipse IDE required an update of the graphic packages org.eclipse.gef.* and org.eclipse.draw2d.* and the substitution of some in Eclipse Kepler 4.3.1 deprecated constructs with the new ones.
- The icons for the selection of random, guided, and interactive simulation in the Simulation View have been replaced by a pull-down menu with the textual options Random simulation, Guided simulation, and Interactive simulation.
- The way the Eclipse default menus for the navigation (Next Annotation, Previous Annotation, Last Edit Location) were removed in Eclipse Indigo had to be done differently in Eclipse Kepler.
- The Single Step button has been disabled for interactive simulation.
- Concurrent simulation runs have been disabled to avoid interference when displaying more MSCs at the same time.
- In addition to the SpinRCP version in the Title bar, the current SpinRCP release date, the version, and the Spin release date have been added.

SpinRCP Version 2.0.0 – 26 September 2013

- Major upgrades, as described in http://www.midem-drustvo.si/Journal%20papers/MIDEM_43%282013%294p235.pdf, have been made.
- This version of SpinRCP has not been publicly released.
- An extension of the SpinRCP parser to cope with new filenumber/linenumber references in a new standardized output format since Spin Version 6 has been made. The old Spin output format remains to be supported, too.
- The user interface for never claim specification has been extended. Four modes can now be used:
  - in-model (inline) LTL formula/claim name (available since Spin Version 6),
  - LTL formula in the text field (since Spin Version 6 no need for the symbol definitions text field),
  - LTL formula in a 1-line file,
  - never claim in a file.

- An interactive simulation type has been introduced.
- For all kinds of simulation, the maximum number of steps can be set.
- From this version onwards, the correctness of each change of a path to an external tool will be checked by running the tool with a simple command and checking if its response is as expected.
- Paths to the external tools may contain spaces. SpinRCP detects them and embraces such paths by double-quotes.
- All file dialogs have been made more user-friendly using filtering files by file extensions.
- New parameters, including the tooltips help have been added to the drop-down menus for entering extra verifier generation options, extra compile-time directives, and extra run-time options. The user interface has also been improved.
- In the Simulation preference page, it is now possible to choose how the full queue behaves during the simulation (either blocks new messages or loses them). This selection is independent of how the full queue behaves during verification, which was already available in the original version of SpinRCP.
- From this version onwards, the individual variables' default values in all preference pages (Spin, MSC Viewer, Promela Editor, Simulation, Verification) can be set.
- A Redundancy Check option that can detect eventual redundancies in the Promela model has been introduced.
- A Symbol Table option that produces symbol table information for the Promela model has been introduced.
- The Automata View option that can display a graph of a finite-state machine for each process and each never claim using the dot tool from Graphviz has been introduced. Currently, ten different graphical file formats can be selected.
- A click on the Simulation, Verification, or Automata View option opens a corresponding preference page, where various parameters for those options can be entered or selected.
- The Simulation View has been changed. A Simulation Stop button, Simulation step counter, Variable values table, and the Queues contents values have been introduced.
- Import trail option that reads the simulation trail file and draws the corresponding MSC has been added to the Tool bar.
- From this version onwards, the processes in MSCs will be colored yellow.
- The positions of a process name and a process ID at a displayed MSC have been exchanged: first comes the process name, then the process ID.
- A Find/Replace command to search for and replace a specific text has been added to the Edit menu in the Menu bar.
- In the Multi-page Editor, the default file name model.pml has been removed.
- In a newly opened Promela file, the default creation of an empty init process is now omitted.

- Correct handling of multiple simultaneously opened Promela models in different folders and subfolders is now ensured.
- From this version onwards, SpinRCP will perform all processing on the original Promela model file and no longer on its copy with a fixed name pan_in.pml.
- Help contents for SpinRCP have been implemented in a separate org.eclipse.helprcp.content plug-in that contains many HTML files with descriptions of particular topics and many XML configuration files.
- The user interface of the Spin Trail to MSC view has been improved.
- Displaying a progress bar during long computations has been improved.
- The code has been improved to become platform-independent.
- Many bugs in the code have been fixed.
- A general code cleanup has been made.
- It has now been developed in Eclipse Indigo 3.7.2 with Java 1.7.

SpinRCP Version 1.0.0 – 13 April 2011

- The original version was described in http://dkum.uni-mb.si/Dokument.php?id=24275.
- This version of SpinRCP was not publicly released.
- It was developed in Eclipse Helios 3.6 with Java 1.6.