Tinn-R Editor – GUI for R Language and Environment

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User Guide

TINN-R EDITOR - GUI FOR R LANGUAGE AND ENVIRONMENT

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Dedication

This user guide is dedicated to all those who
have assisted us with the Tinn-R project,
either by sending suggestions or
by contributing to its development.

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CHAPTER 1

OVERVIEW

This section provides a brief overview of the Tinn-R project.

1.1 QUICK START

Let's say you don't have time to read the full user guide just yet. That's OK, we know it is huge, so let's just give you a few tips on how to get started:

- If your version is the same or above 3.0.1.0, Tinn-R does not require any special configuration. That is, the program is ready to be used. One important thing to be done before using it: set a `R` mirror as close as possible to where you work. For that, first click on `CTRL + F8`. This opens the `Tools` window, then click on `Database/R mirrors`. Select the `R` mirror and push the button that shows an hourglass in the taskbar database. The chosen repository will be the new default for all actions dependent repository (install packages, upgrade packages, etc);
- If your version is the below the 3.0.1.0, read the basic instructions to install and configure `R` and Tinn-R; `it's a small and easy to follow document`
- Choose either Rgui or Rterm; `it takes one mouse click`
- Open *Help/English/Example of script.r*; `another mouse click`
- Use the *R toolbar* to control `R`; `it only takes one mouse click for each action`
- Have fun!

If you have any questions we suggest you consult this user guide.

1.2 WHAT IS TINN-R?

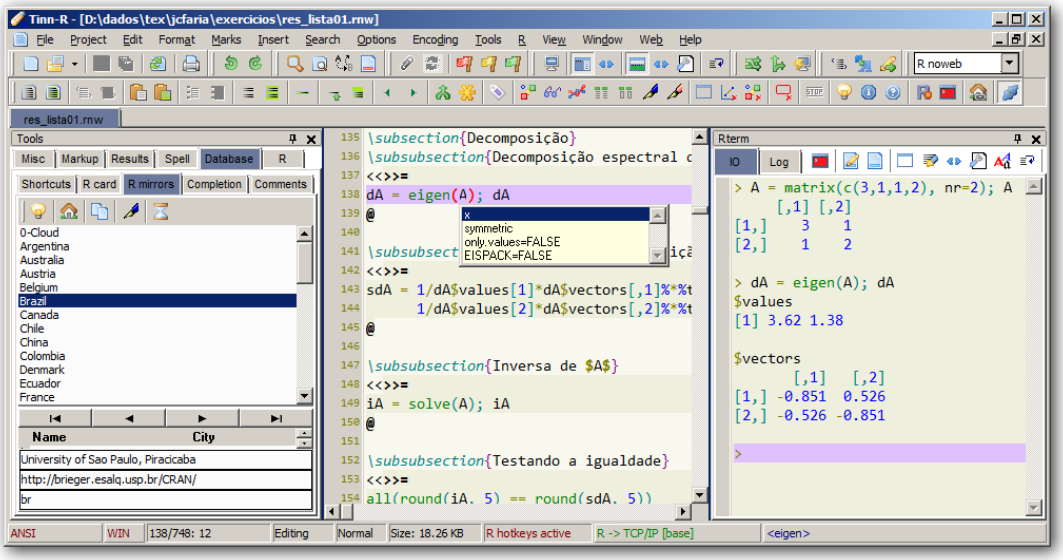

FIGURE 1.1: Tinn-R screenshot.

Tinn is a small ASCII file editor primarily intended as a better replacement for the default Notepad running under the Windows OS. The name is the recursive acronym: Tinn is not Notepad.
Tinn-R (Figure 1.1) is an extension of the original Tinn editor, providing additional functionality to control R running as Rgui (in SDI mode), Rterm and JGR and a whole lot of additional resources.
Tinn-R can also be thought of as feature-rich replacement of the basic script editor provided with Rgui. It provides syntax-highlighting, code submission as a whole or line-by-line, in addition to many other useful tools to ease the writing and debugging of R code.
Both Tinn and Tinn-R are distributed under the GPL 2 license or above.

1.3 WHY TINN-R?

Do you:

- like the open source initiative?
- need a simple but powerful GUI/Editor for the R environment?
- enjoy the ability to have syntax highlighting in your source code?

- need a tool that is simple to use but with the capabilities of a mighty editor?
- need a tool to work with plain text files?
- need a tool with simple commands for working with LaTeX, Sweave and Txt2tags?
- want to have access to the functionality of commercial and professional products but without having to pay for it?

If you have answered YES to any of the questions above, then Tinn-R is a good option for you!

1.4 WHAT DO YOU GET BY USING TINN-R?

- The ability to communicate with the R environment by sending instructions, controling its processing, and receiving results:
  - Rterm.exe
  - Rgui.exe
  - JGR
- Projects:
  - Create project files to organize your work including one level of sub-folders and automatic file name sorting
  - Easy project management in graphical and text modes
- Work with unlimited length files
- Work on multiple documents at the same time, choosing between multiple-document interface (MDI) and tabbed document interface (TDI)
- Single-document window splitting
- Support to macros (volatile):
  - Record
  - Playback commonly used sequences
- Search and replace not restricted to your active file, but also extendable to all open files, all project files, or any folder
- View file differences with color highlighting
- Syntax highlighting, which can be set by file type

- Spell checking
- Multiple undo/redo
- Highlighted color syntax with print preview
- Ability to select:
  - Normal
  - Column
  - Lines
- Ability to bookmark:
  - Line
  - Block
- Line numbers
- Special characters
- Sort multiple variable types:
  - String
  - Data
  - Number
- Count:
  - Character
  - Words
  - Spaces
- ASCII chart
- Export with highlight to clipboard:
  - RTF
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  - Deplate

  - Txt2tags
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  - Compilation
  - Inverse DVI search.

We are constantly on the move!

1.5 DO I HAVE TO PAY FOR TINN-R?

Absolutely NOT! It's free as in beer and licensed under GPL.
However, donations are welcome, since creating and maintaining the project involve many costs. See how you can do this in `Help/About/Donation`.

1.6 WHAT WAS THE MOTIVATION TO START AND MAINTAIN THE TINN-R PROJECT?

Motivation to start Tinn-R: We could not find a GUI/Editor for R running in the Windows OS that would give us all the ease of use and flexibility we wanted. So, we started this project using an open source editor called Tinn as our initial platform.

Motivation to maintain Tinn-R: The most difficult phase of the project was getting started: choosing the editor; all the preliminary performance and stability tests; understanding source structure; among many other struggles. Making it to run more and more smoothly and according to our daily needs was then a natural consequence. This is all to say that the open source movement has substantially changed our lives for better. We strongly believe in making software more widely available so that more people can benefit from it. We consider Tinn-R to be our small contribution to this fantastic open source initiative.

1.7 WHAT IS THE SENTENCE THAT WE, FROM THE DEVELOPMENT TEAM, MOST LIKE TO HEAR?

Tinn-R made my life easier ... thanks for creating it.

1.8 ACKNOWLEDGMENT

We would like to thank those who have assisted us with the Tinn-R project, either by sending suggestions or by contributing to its development.

1.9 FEEDBACK, SUGGESTIONS AND BUG REPORTS

Please submit feedback to José Cláudio Faria. If you submit a bug report, please provide as much detail as possible. This includes indicating the Tinn-R version, your operating system (Windows XP, Windows 7, etc) and language (English, French, Portuguese). If the bug is related to an interface with R, please also indicate which version of R you are using, as well as whether you are running Rterm or Rgui. Ideally, please also add the content of the *Tools/Results/Ini log* interface since this will help us address the issue more promptly.

1.10 WHAT TOOLS WERE USED TO MAKE THIS GUIDE?

It were used mainly:

1. Tinn-R to edit and manager (as project) the LaTeX source files
2. TeXstudio was also used in some parts where, to improve the productivity, it was necessary a more specialized LaTeX editor
3. Vim and LaTeXBox plugin when working under Linux/Debian (the actual preferred OS of the Tinn-R project coordinator)
4. WinSnap to get all images from the application
5. R as interpreter
6. LibreOffice to make the cover pages
7. MikTeX to compile the LaTeX source files to final PDF format
8. Foxit Reader as PDF viewer

CHAPTER 2

BASICS

This section provides the basics about the Tinn-R project.

2.1 CONFIGURATION

This section provides information on Tinn-R configuration and associated applications.

Uninstall Tinn-R

- **ALWAYS UNISTALL ANY PRIOR VERSION OF Tinn-R BEFORE INSTALLING A NEW ONE!** Tinn-R has its own uninstall option.
- The folder where Tinn-R project stores the ini files will not be removed when unistalling it. Why? Because whenever you install a different version all your preferences will be preserved.
- You can check where these files are located by checking *Help/-Main/Ini files (path information)*. If you prefer, you may delete these settings by removing the entire folder manually. **All your preferences will be lost forever if you don't have a backup file**.

Install and configure Tinn-R and R

R basic configuration:

- Starting from version 1.18.X.X, `Tinn-R requires R to run in SDI mode`. So, Tinn-R is not compatible neither with Rgui in MDI mode (only SDI) nor with S-PLUS. The latest compatible version was the historic 1.17.2.4.

- Starting from version 2.0.0.0, Tinn-R requires R to run either Rterm or Rgui in SDI mode. There are four alternatives you can choose from: Rterm, Rgui in SDI mode, SciViews GUI (which also requires R in SDI mode), or JGR.
- You have three basic options in order to switch Rgui from MDI to SDI:
  1. In Rgui, select Edit/GUI preferences..., set SDI and click on Save, then OK without changing the name of the proposed file. Then, click OK or Cancel in the Rgui Configuration Editor (ignore any eventual messages), and restart Rgui (changes will not be taken into account in the current session).
  2. Manually edit the file Rconsole:

```
## Style
# This can be yes (for MDI) or no (for SDI).
MDI = no
```

  3. Create a shortcut to R on your desktop (or anywhere that is convenient), and type in the switch -sdi after the ...\Rgui.exe in the Target box. To do this, right click on your shortcut, select Properties and navigate to the Shortcut tab.

If you have any version of Tinn-R (>= 3.0.1.0) installed:
If your version is the same or above 3.0.1.0, Tinn-R does not require any special configuration. That is, the program is ready to be used. One important thing to be done before using it: set a R mirror as close as possible to where you work. For that, first click on CTRL + F8. This opens the Tools window, then click on Database/R mirrors. Select the R mirror and push the button that shows an hourglass in the taskbar database. The chosen repository will be the new default for all actions dependent repository (install packages, upgrade packages, etc).

If you have any version of Tinn-R (<= 2.2.0.2) installed:

1. Uninstall previous versions of Tinn-R
2. Edit the file Rprofile.site (folder *etc* where R is installed) and comment (or remove) all prior configuration scripts RELATED TO TINN-R
3. Start R
4. install the following packages:

a) TinnR

b) svSocket

c) formatR

5. Close R

6. Install the new version of Tinn-R

7. Start Tinn-R

8. From the Tinn-R main menu, choose the option `R/Configure/Permanent (Rprofile.site)`. It will write the following text to the file Rprofile.site:

```
##===============================================================
## Tinn-R: necessary packages and functions
## Tinn-R: >= 2.4.1.1 with TinnR package >= 1.0.3
##===============================================================
## Set the URL of the preferred repository, below some examples:
options(repos='http://cran.at.r-project.org/')      # Austria/Wien
#options(repos='http://cran-r.c3sl.ufpr.br/')       # Brazil/PR
#options(repos='http://cran.fiocruz.br/')           # Brazil/RJ
#options(repos='http://www.vps.fmvz.usp.br/CRAN/')  # Brazil/SP
#options(repos='http://brieger.esalq.usp.br/CRAN/') # Brazil/SP

library(utils)

## Check necessary packages
necessary <- c('TinnR',
               'svSocket',
               'formatR')

installed <- necessary %in% installed.packages()[, 'Package']
if (length(necessary[!installed]) >=1)
install.packages(necessary[!installed])

## Load packages
library(TinnR)
library(svSocket)

## Uncomment the two lines below if you want Tinn-R to always start R at start-up
## (Observation: check the path of Tinn-R.exe)
#options(IDE='C:/Tinn-R/bin/Tinn-R.exe')
#trStartIDE()

## Option
options(use.DDE=T)

## Start DDE
trDDEInstall()

## Short paths
.trPaths <- paste(paste(Sys.getenv('APPDATA'),
                        '\\Tinn-R\\tmp\\',
```

```
            sep=''),
c('',
  'search.txt',
  'objects.txt',
  'file.r',
  'selection.r',
  'block.r',
  'lines.r',
  'reformat-input.r',
  'reformat-output.r'),
sep='')
```

9. Start Rgui or Rterm from within Tinn-R,
10. Read the content from the links below:
    - *Card*: to know the shortcuts related with Rterm and all others
    - *What is new*: to know the news.

Information about how to customize the `Rprofile.site` file can be obtained from Initialization at Start of an R Session and an example of this file from SourceForge.

If you have any version of Tinn-R (>= 2.2.0.2) installed and configured:

1. Uninstall the prior version of Tinn-R 2.X.X.X
2. Install the new version of Tinn-R
3. Run it.

If you want to install any old version of Tinn-R (<= 2.0.0.0"):

- **Downgrading**: `rename (or delete) the folder where Tinn-R stores the ini files`. The uninstall is necessary since Tinn-R does not downgrade automatically. If you encounter any problems while downgrading, check the ini folder and respective files.
- Download and install Tinn-R
- Install the `SciViews` bundle, then type `guiDDEInstall()` in `R` and `that's all`!

```
> install.packages('SciViews', dep=T)
> guiDDEInstall()
```

- Perhaps the best way to get R to communicate with Tinn-R from the time it is started is to add the following commands to `../etc/Rprofile.site` in the R install directory:

```
#=============================================================
# Tinn-R: necessary packages and functions
#=============================================================
library(utils)
necessary = c('svIDE', 'svIO', 'svSocket', 'R2HTML')
installed = necessary %in% installed.packages()[, 'Package']
if (length(necessary[!installed]) >=1)
install.packages(necessary[!installed], dep = T)

library(svIDE)
library(svIO)
library(svSocket)
library(R2HTML)
guiDDEInstall()
```

- If you chose the latter option `.../etc/Rprofile.site`, a nice additional functionality is provided by adding the two lines below `BEFORE` the `library(svIDE)` command:

```
options(IDE = 'C:/Tinn-R/bin/Tinn-R.exe')
options(use.DDE = T)
```

The first line tells R that you want to use Tinn-R as your IDE (Integrated Development Environment). To make this happen, you should change the path that leads to where `Tinn-R.exe` is installed if it happens to be different from the default configuration. The second line indicates that you want to start the DDE server automatically.

By doing this, Tinn-R will start automatically once you invoke R.

Working with Rgui

- Tinn-R has an icon within the *Options toolbar* containing the hint `Options: return focus to editor after send/control Rgui` which enables the user to configure the focus control. When `checked`:
  - If the editor has the focus: it will `go back` to the editor after any *send to* or *R control* action;
  - Otherwise, the focus will be set to the Rgui interface.

Working with Rterm

- The above-mentioned icon will be disabled with Rterm interface. The following will then happen:
  - If the focus is placed on the editor it will `go back` to the editor after any *send to* or *R control* action;
  - If the focus is placed on the Rterm (*IO* or *Log*), it will be `maintened` in this interface (*IO*);
  - Situations above are also the case when working with two monitors.

Rterm interface and debug package

- Several changes were made to the debug package (1.0.2) regarding the messaging system (*stdout* and *stderr*). The default option is no longer compatible with Rterm interface implementation.
- The best way to make it compatible again is to add the option below to the Rprofile.site file:

```
options(debug.catfile = 'stdout')
```

Speller installation

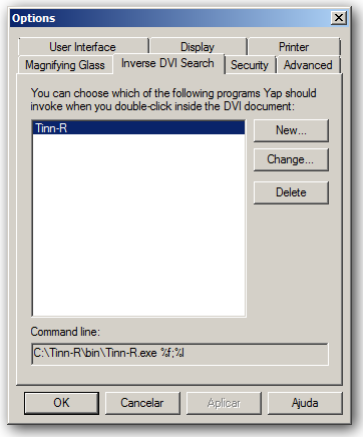
- To install this resource:
  1. Close Tinn-R (if it is running);
  2. Download the dictionaries you would like to add to Tinn-R;
  3. Install the file (for example ISpEnFrGe.exe);
- Upon start, Tinn-R will recognize all installed dictionaries. You should choose one as your default.
- Before installing new dictionaries, it is strongly recommended that you close Tinn-R.
- Another useful tool is the `UserDicEditor` which enables the editing of dictionaries.

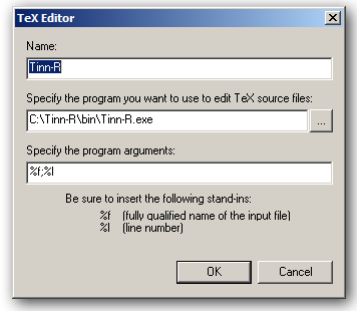
Inverse DVI search

- Tinn-R is able to perform `inverse DVI search`. To get this function to work, include in your DVI previewer the path of the binary executable file for Tinn-R along with the parameters for file and line. For example, using YAP under Miktex, the configuration would be (assuming a default path for Tinn-R):

```
C:\Tinn-R\bin\Tinn-R.exe "%f;%l"
```

  - Please make sure that there is no space between the parameters %f(related to file) and %l(related to line);

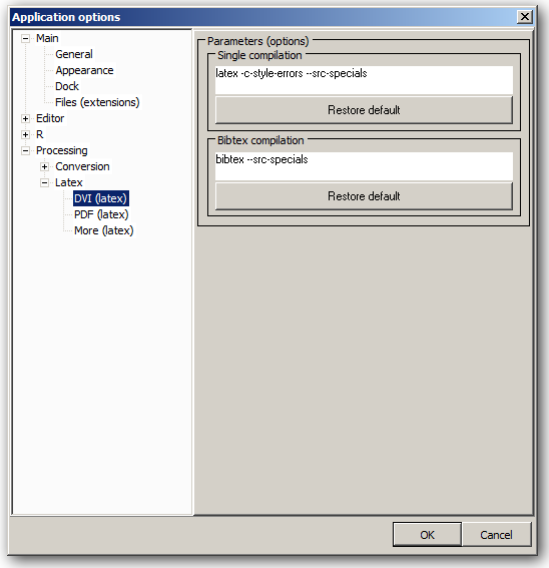




  - It is necessary to add the parameter for Miktex compilation within Tinn-R (*Options/Application/Processing/Latex/DVI*): latex -c-style-errors `-src-specials`;

  - Tinn-R can do all of this automatically by setting the option *Restore default*:

```
latex -c-style-errors --src-specials
and
bibtex --src-specials
```



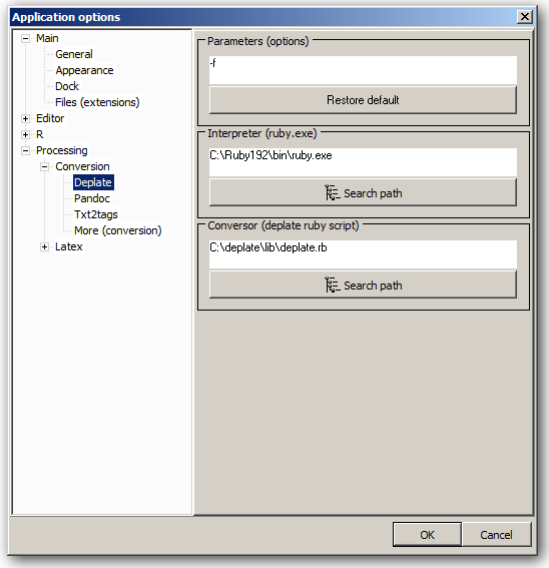
Ruby and Deplate

- Deplate (user guide here) is a remote Ruby based tool for converting documents written in wiki-like markup to LaTeX, HTML, HTML slides, or DocBook format. Deplate supports page templates, embedded LaTeX code, footnotes, citations, bibliographies, automatic generation of indices, tables of contents, among others. Deplate can also be used to create Web pages and, via LaTeX or DocBook, high-quality printouts.

- Tinn-R works with the Ruby interpreter for Windows (ruby.exe) and Ruby scripts to generate file conversation within deplate.

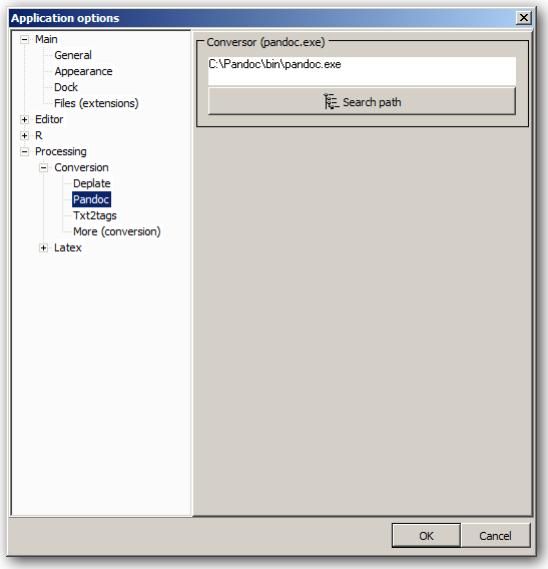
- To install and configure these resources follow these steps:

  1. Download and unzip the Ruby interpreter anywhere in your computer;
  2. Download and unzip Deplate anywhere in your computer;
  3. Within Tinn-R, go to `Options/Application/Processing/Conversion/Deplate` and add information on parameters (`-f` is the default), the interpreter path (`ruby.exe`), and the converter (`deplate.rb ruby script`);



We recently observed a problem when converting files with file names with an underscore. For example `deplate_intro.dplt`. In these cases the file conversion is completed, but Tinn-R won't open the file since it can't find it. This pattern is caused by Deplate (a ruby script) generating a file named `deplate__intro.html`. *Observe that this file name contains a double underscore.* In sum, for the time being, avoid underscores in file names when you intend to convert them later through Deplate.

Pandoc



- If you need to convert files from one markup format into another, Pandoc is your swiss-army knife.

- To install and configure Pandoc resources, just follow these steps:

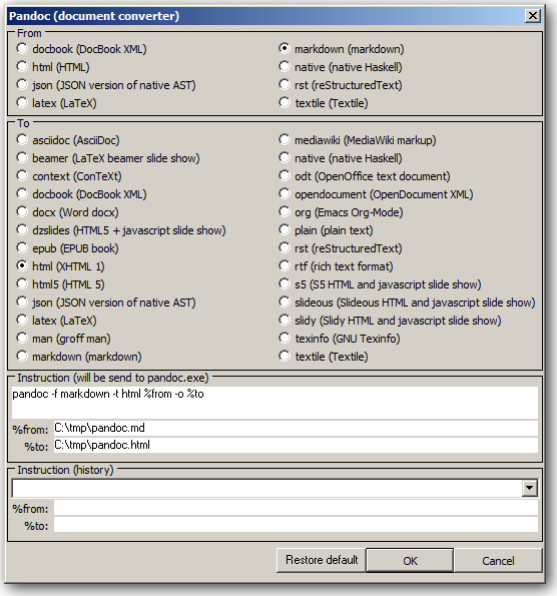
  1. Download and install the converter Pandoc anywhere in your computer;

  2. Within Tinn-R, go to `Options/Application/Processing/Conversion/Pandoc` and add information on path (`pandoc.exe`).

- Pandoc can convert documents:

From
DocBook
HTML
JSON version of native AST
LaTeX
markdown
native Haskell
reStructuredText
textile

To	Subset(s)
Documentation formats	DocBook, GNU TexInfo, Groff man pages
Ebooks	EPUB
HTML formats	XHTML, HTML5, and HTML slide shows using Slidy, Slideous, S5, or DZSlides
Lightweight markup formats	Markdown, reStructuredText, AsciiDoc, MediaWiki markup, Emacs Org-Mode, Textile
PDF via LaTeX	
TeX formats	LaTeX, ConTeXt, LaTeX Beamer slides
Word processor formats	Microsoft Word docx, OpenOffice/LibreOffice ODT, OpenDocument XML



Python and Txt2tags

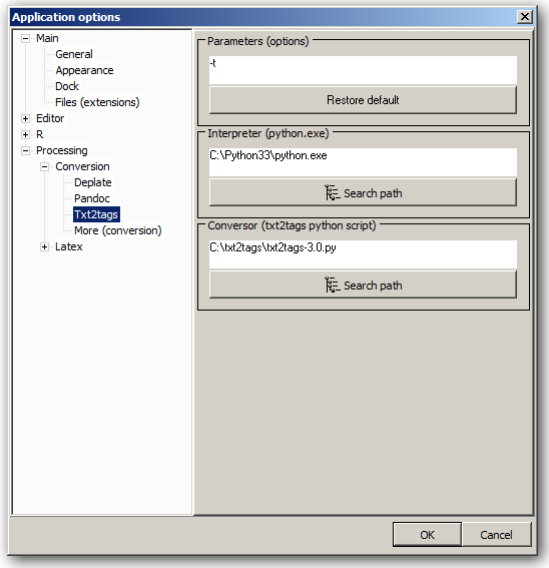
- Txt2tags (user guide here) converts a text file with `minimal and human readable markup` to: HTML, XHTML, SGML, LaTeX, Lout, UNIX man page, Wikipedia, Google Code Wiki, DokuWiki, MoinMoin, MagicPoint (mgp), and PageMaker. It is simple and fast, featuring automatic TOC, macros, filters, include, tools, GUI, CLI, Web interfaces, translations, and extensive documentation.

- Tinn-R works with the Phyton interpreter for Windows (python.exe), using Python scripts to make the conversion (txt2tags).

- To install and configure Python resources, just follow these steps:

    1. Download and install the Python interpreter anywhere in your computer;

2. Download and unzip Txt2tags anywhere in your computer;
3. Within Tinn-R, go to `Options/Application/Processing/Txt2tags` and add information on parameters (`-t` is the default), interpreter path (`python.exe`) and the converter (`txt2tags python script`);



2.2 KEYBOARD SHORTCUTS (DEFAULT)

This section provides information about keyboard shortcuts.

The most commonly used shortcuts

R interface:

LISTING 2.1: R INTERFACE KEYBOARD SHORTCUTS

```
ALT   + DOWN            : R history: down (IO)
ALT   + L               : Clear (Log)
ALT   + UP              : R history: up (IO)
CTRL  + ALT + DOWN      : IO: set focus
CTRL  + ALT + RIGHT     : Log: set focus
CTRL  + ALT + UP        : Editor: set focus
CTRL  + ENTER           : Send any prior line (IO)
CTRL  + L               : Clear (IO)
SHIFT + CTRL + B        : Clear (IO and Log)
```

Visualization:

LISTING 2.2: VISUALIZATION KEYBOARD SHORTCUTS

```
ALT   + LEFT            : Tools: align left
ALT   + RIGHT           : Tools: align right
ALT   + V               : R resources: visible (show/hide)
CTRL  + F8              : Tools: visible (show/hide)
CTRL  + F9              : R interface: visible (show/hide)
CTRL  + F10             : R interface: minimize
CTRL  + F11             : R interface: optimize
CTRL  + F12             : R interface: maximize
CTRL  + ALT  + G        : Gutter (show/hide)
CTRL  + ALT  + L        : Line number (show/hide)
CTRL  + ALT  + K        : Special characters (show/hide)
CTRL  + ALT  + V        : Tool bars: all (show/hide)
CTRL  + TAB             : Change seq. the active page to the right*
CTRL  + SHIFT + TAB     : Change seq. the active page to the left*
SHIFT + CTRL + UP       : Increase font size**
SHIFT + CTRL + DOWN     : Decrease font size**
*  (requires more than one)
** (text within the main interface)
```

Navigation:

LISTING 2.3: NAVIGATION KEYBOARD SHORTCUTS

```
CTRL  + END             : End of a doc
CTRL  + HOME            : Beginning of a doc
END                     : End of a line
HOME                    : Beginning of a line
```

Search/Replace and Go:

LISTING 2.4: SEARCH/REPLACE AND GO KEYBOARD SHORTCUTS

```
CTRL  + F               : Find
F3                      : Find again
SHIFT + CTRL + F        : Search in files
CTRL  + R               : Replace
CTRL  + G               : Go to line
```

Function Keys:

LISTING 2.5: FUNCTION KEYS

```
F1                      : Help on selected word*
F2                      : List the structure of selected object*
F3                      : Find again
F7                      : Macro record
F8                      : Macro play
F9                      : Clear the R console*
F10                     : Close all graphic devices*
F11                     : Remove all objects*
F12                     : Clear all*
* (requires an R session)
```

Edition:

LISTING 2.6: EDITION KEYBOARD SHORTCUTS

```
ALT   + C               : Block comment
ALT   + N               : Block uncomment (first ocurrence)
ALT   + Z               : Block uncomment (all ocurrence)
CTRL  + (               : Insert (or replace) (|)
CTRL  + )               : Insert (or replace) ()
CTRL  + A               : Select all
CTRL  + C               : Copy
CTRL  + END             : End doc
CTRL  + HOME            : Beginning of a doc
CTRL  + I               : Block indent
CTRL  + T               : Delete word
CTRL  + U               : Block unindent
CTRL  + V               : Paste
CTRL  + X               : Cut
CTRL  + Y               : Delete line
CTRL  + Z               : Undo
END                     : End of a line
HOME                    : Beginning of a line
SHIFT + CTRL + Z        : Redo
```

Marks and Go to Marks:

LISTING 2.7: MARKS AND GO TO MARKS KEYBOARD SHORTCUTS

```
CTRL  + NUMBER[0..9]        : Go to mark (no numeric keypad)
SHIFT + CTRL + NUMBER[0..9] : Mark (no numeric keypad)
```

Project:

LISTING 2.8: PROJECT KEYBOARD SHORTCUTS

```
CTRL  + INS             : Add current file to selected group
SHIFT + CTRL + INS      : Add file(s) to selected group (with dialog)
DEL                     : Delete selected group or file
```

R Script Edition:

LISTING 2.9: R SCRIPT EDITION KEYBOARD SHORTCUTS

```
CTRL + +                : Insert ->  (numeric keypad)
CTRL + -                : Insert <-  (numeric keypad)
CTRL + *                : Insert tip (numeric keypad)
CTRL + ENTER            : Send current line to R and insert a line break
```

Selection:

LISTING 2.10: SELECTION KEYBOARD SHORTCUTS

```
CTRL  + ALT  + S        : Mark block
CTRL  + ALT  + Z        : Unmark block
CTRL  + ALT  + X        : Unmark all
SHIFT + CTRL + C        : Selection: set to column mode
SHIFT + CTRL + L        : Selection: set to line mode
SHIFT + CTRL + N        : Selection: set to normal mode
```

Compilation:

LISTING 2.11: COMPILATION KEYBOARD SHORTCUTS

```
CTRL  + ALT  + D       : Compilation: LaTeX to DVI (single)
CTRL  + ALT  + P       : Compilation: LaTeX to DVI (single)
SHIFT + CTRL + ALT + D : Compilation: LaTeX to DVI (bibtex)
SHIFT + CTRL + ALT + P : Compilation: LaTeX to PDF (bibtex)
```

Conversion and Visualization:

LISTING 2.12: CONVERSION AND VISUALIZATION KEYBOARD SHORTCUTS

```
SHIFT + CTRL + H       : Conversion: txt2tags to HTML
SHIFT + CTRL + P       : Conversion: Pandoc*
SHIFT + CTRL + S       : Conversion: txt2tags to Sweave
SHIFT + CTRL + T       : Conversion: txt2tags to LaTeX
SHIFT + CTRL + O       : Open current HTML files**
SHIFT + CTRL + ALT + H : Conversion: deplate to HTML
SHIFT + CTRL + ALT + S : Conversion: deplate to Sweave
SHIFT + CTRL + ALT + T : Conversion: deplate to LaTeX
*  (a universal document converter)
** (with system default browser)
```

Main menu (systematically)

LISTING 2.13: MAIN MENU KEYBOARD SHORTCUTS

```
ALT + F                 : File
ALT + P                 : Project
ALT + E                 : Edit
ALT + A                 : Format
ALT + M                 : Marks
ALT + I                 : Insert
ALT + S                 : Search
ALT + O                 : Options
ALT + T                 : Tools
ALT + R                 : R
ALT + W                 : View
ALT + D                 : Window
ALT + B                 : Web
ALT + H                 : Help
```

File:

LISTING 2.14: FILE MENU KEYBOARD SHORTCUTS

```
CTRL  + N               : New file
CTRL  + O               : Open file
CTRL  + P               : Print
CTRL  + S               : Save file
CTRL  + W               : Close file
SHIFT + CTRL + R        : Reload file
SHIFT + CTRL + W        : Close all files
```

Edit:

LISTING 2.15: EDIT MENU KEYBOARD SHORTCUTS

```
CTRL + Z                : Undo
CTRL + SHIFT + Z        : Redo
CTRL + C                : Copy
CTRL + X                : Cut
CTRL + V                : Paste
CTRL + A                : Copy all
ALT  + C                : Block/line comment
ALT  + N                : Block/line uncomment first occurrence
ALT  + Z                : Block/line uncomment all occurrences
```

Format:

LISTING 2.16: FORMAT MENU KEYBOARD SHORTCUTS

```
CTRL + F5               : Reformat R (file or selection)
CTRL + I                : Block indent
CTRL + U                : Block unindent
```

Marks:

LISTING 2.17: MARKS MENU KEYBOARD SHORTCUTS

```
CTRL  + NUMBER[0..9]        : Go to mark (no numeric keypad)
SHIFT + CTRL + NUMBER[0..9] : Mark (no numeric keypad)
CTRL  + ALT  + S            : Mark block
CTRL  + ALT  + Z            : Unmark block
CTRL  + ALT  + X            : Unmark all
```

Insert:

LISTING 2.18: INSERT MENU KEYBOARD SHORTCUTS

```
SHIFT + CTRL + I        : Insert dimensional element (LaTeX)
```

Search:

LISTING 2.19: SEARCH MENU KEYBOARD SHORTCUTS

```
CTRL + F                : Search text
CTRL + G                : Go to
CTRL + R                : Replace text
F3                      : Search again
```

Options:

LISTING 2.20: OPTIONS MENU KEYBOARD SHORTCUTS

```
SHIFT + CTRL + C        : Selection: set to column mode
SHIFT + CTRL + L        : Selection: set to line mode
SHIFT + CTRL + N        : Selection: set to normal mode
```

Tools:

LISTING 2.21: TOOLSMENU KEYBOARD SHORTCUTS

```
SHIFT + CTRL + H        : Conversion: txt2tags to HTML
SHIFT + CTRL + P        : Conversion: Pandoc*
SHIFT + CTRL + S        : Conversion: txt2tags to Sweave
SHIFT + CTRL + T        : Conversion: txt2tags to LaTeX
SHIFT + CTRL + O        : Open current HTML files**
SHIFT + CTRL + ALT + H  : Conversion: deplate to HTML
SHIFT + CTRL + ALT + S  : Conversion: deplate to Sweave
SHIFT + CTRL + ALT + T  : Conversion: deplate to LaTeX
CTRL  + ALT  + D        : Compilation: LaTeX to DVI (single)
CTRL  + ALT  + P        : Compilation: LaTeX to DVI (single)
SHIFT + CTRL + ALT + D  : Compilation: LaTeX to DVI (bibtex)
SHIFT + CTRL + ALT + P  : Compilation: LaTeX to PDF (bibtex)
CTRL  + B               : Match bracket
F7                      : Macro/Record
F8                      : Macro/Play
*  (a universal document converter)
** (with system default browser)
```

R:

LISTING 2.22: R MENU KEYBOARD SHORTCUTS

```
ALT   + L               : Clear (Log)
CTRL  + ALT  + DOWN     : IO: set focus
CTRL  + ALT  + RIGHT    : Log: set focus
CTRL  + ALT  + UP       : Editor: set focus
CTRL  + F9              : R interface: visible (show/hide)
CTRL  + F10             : R interface: minimize
CTRL  + F11             : R interface: optimize
CTRL  + F12             : R interface: maximize
CTRL  + L               : Clear (IO)
SHIFT + CTRL + B        : Clear (IO and Log)
```

View:

LISTING 2.23: VIEW MENU KEYBOARD SHORTCUTS

```
ALT  + V                : R resourses: visible (show/hide)
CTRL + F8               : Tools: visible (show/hide)
CTRL + F9               : R interface: visible (show/hide)
CTRL + F10              : R interface: minimize
CTRL + F11              : R interface: optimize
CTRL + F12              : R interface: maximize
CTRL + ALT + UP         : Editor: set focus
CTRL + ALT + DOWN       : IO: set focus
CTRL + ALT + RIGHT      : Log: set focus
ALT  + LEFT             : Tools: align left
ALT  + RIGHT            : Tools: align right
CTRL + ALT + V          : Tool bars: all (show/hide)
CTRL + ALT + L          : Line number (show/hide)
CTRL + ALT + K          : Special characters (show/hide)
```

Call Tip

LISTING 2.24: CALL TIP KEYBOARD SHORTCUTS

```
CTRL + D                : Possible option
CTRL + Q                : Possible option
```

Code (or data) Completion

LISTING 2.25: CODE COMPLETION KEYBOARD SHORTCUTS

```
SHIFT + CTRL + D        : Possible option
SHIFT + CTRL + Q        : Possible option
```

R Explorer

LISTING 2.26: R EXPLORER KEYBOARD SHORTCUTS

```
CTRL  + E               : Refresh R environment
SHIFT + CTRL + E        : Refresh R explorer or filter
```

Alphabetical List of Keyboard Shortcuts

ALT + : A-Z:

LISTING 2.27: ALT KEYBOARD SHORTCUTS

```
ALT + A                 : Format
ALT + B                 : Web
ALT + C                 : Block comment
ALT + D                 : Window
ALT + DOWN              : R history: down (IO)
ALT + E                 : Edit
ALT + F                 : File
ALT + H                 : Help
ALT + I                 : Insert
ALT + L                 : Clear (Log)
ALT + LEFT              : Tools: align left
ALT + M                 : Marks
ALT + N                 : Block uncomment (first occurrence)
ALT + O                 : Options
ALT + P                 : Project
ALT + R                 : R
ALT + RIGHT             : Tools: align right
ALT + S                 : Search
ALT + T                 : Tools
ALT + UP                : R history: up (IO)
ALT + V                 : R resources: visible (show/hide)
ALT + W                 : View
ALT + Z                 : Block uncomment (all occurrence)
```

CTRL + : A-Z, 0-9, /, (and):

LISTING 2.28: CTRL KEYBOARD SHORTCUTS

```
CTRL + -                : Insert <-  (numeric keypad)
CTRL + (                : Insert (or replace) (|)
CTRL + )                : Insert (or replace) ()
CTRL + *                : Insert tip (numeric keypad)
CTRL + +                : Insert ->  (numeric keypad)
CTRL + A                : Select all
CTRL + ALT + D          : Compilation: LaTeX to DVI (single)
CTRL + ALT + DOWN       : IO: set focus
CTRL + ALT + G          : Gutter (show/hide)
CTRL + ALT + K          : Special characters (show/hide)
CTRL + ALT + L          : Line number (show/hide)
CTRL + ALT + P          : Compilation: LaTeX to DVI (single)
CTRL + ALT + RIGHT      : Log: set focus
CTRL + ALT + S          : Mark block
```

```
CTRL + ALT + UP         : Editor: set focus
CTRL + ALT + V          : Tool bars: all (show/hide)
CTRL + ALT + X          : Unmark all
CTRL + ALT + Z          : Unmark block
CTRL + B                : Match bracket
CTRL + C                : Copy
CTRL + D                : Possible option
CTRL + E                : Refresh R environment
CTRL + END              : End doc
CTRL + ENTER            : Send any prior line (IO)
CTRL + ENTER            : Send current line to R and insert a line break
CTRL + F                : Find
CTRL + F5               : Reformat R (file or selection)
CTRL + F8               : Tools: visible (show/hide)
CTRL + F9               : R interface: visible (show/hide)
CTRL + F10              : R interface: minimize
CTRL + F11              : R interface: optimize
CTRL + F12              : R interface: maximize
CTRL + G                : Go to line
CTRL + HOME             : Beginning doc
CTRL + I                : Block indent
CTRL + INS              : Add current file to selected group
CTRL + L                : Clear (IO)
CTRL + N                : New file
CTRL + NUMBER[0..9]     : Go to mark (no numeric keypad)
CTRL + O                : Open file
CTRL + P                : Print
CTRL + Q                : Possible option
CTRL + R                : Replace text
CTRL + S                : Save file
CTRL + T                : Delete word
CTRL + TAB              : Change seq. the active page*
CTRL + U                : Block unindent
CTRL + V                : Paste
CTRL + W                : Close file
CTRL + X                : Cut
CTRL + Y                : Delete line
CTRL + Z                : Undo
CTRL + SHIFT + TAB      : Change seq. the active page to the left*
* (require more than one)
```

DEL:

LISTING 2.29: DEL KEYBOARD SHORTCUT

```
DEL (Project)           : Delete selected group or file
```

END:

LISTING 2.30: END KEYBOARD SHORTCUT

```
END                     : End line
```

Function + : 1-12:

LISTING 2.31: FUNCTION + KEYBOARD SHORTCUTS

```
F1      : Help on selected word*
F2      : List structure of selected object*
F3      : Find again
F7      : Macro record
F8      : Macro play
F9      : Clear the R console*
F10     : Close all graphic devices*
F11     : Remove all objects*
F12     : Clear all*
* (requires an R session)
```

HOME:

LISTING 2.32: HOME KEYBOARD SHORTCUT

```
HOME                    : Beginning line
```

SHIFT + : A-Z, 0-9 and /:

LISTING 2.33: SHIFT + KEYBOARD SHORTCUTS

```
SHIFT + CTRL + ALT + D      : Compilation: LaTeX to DVI (bibtex)
SHIFT + CTRL + ALT + H      : Conversion: deplate to HTML
SHIFT + CTRL + ALT + P      : Compilation: LaTeX to PDF (bibtex)
SHIFT + CTRL + ALT + S      : Conversion: deplate to Sweave
SHIFT + CTRL + ALT + T      : Conversion: deplate to LaTeX
SHIFT + CTRL + B            : Clear (IO and Log)
SHIFT + CTRL + C            : Selection: set to column mode
SHIFT + CTRL + D            : Possible option
SHIFT + CTRL + DOWN         : Decrease font size*
SHIFT + CTRL + E            : Refresh R explorer or filter
SHIFT + CTRL + F            : Search in files
SHIFT + CTRL + H            : Conversion: txt2tags to HTML
SHIFT + CTRL + I            : Insert dimensional element (LaTeX)
SHIFT + CTRL + INS          : Add file(s) to selected group (with dialog)
SHIFT + CTRL + L            : Selection: set to line mode
SHIFT + CTRL + P            : Conversion: Pandoc**
SHIFT + CTRL + N            : Selection: set to normal mode
SHIFT + CTRL + NUMBER[0..9] : Mark (no numeric keypad)
SHIFT + CTRL + O            : Open current HTML files***
SHIFT + CTRL + Q            : Possible option
SHIFT + CTRL + R            : Reload file
SHIFT + CTRL + S            : Conversion: txt2tags to Sweave
SHIFT + CTRL + T            : Conversion: txt2tags to LaTeX
SHIFT + CTRL + UP           : Increase font size*
SHIFT + CTRL + W            : Close all files
SHIFT + CTRL + Z            : Redo
*   (extensive to text of the main interface)
**  (a universal document converter)
*** (with system default browser)
```

2.3 FAQ

This section provides information on **F**requently **A**sked **Q**uestions (FAQ).

What is Tinn-R?

- Tinn is a small ASCII file editor primarily intended as a better replacement for the default Notepad running under the Windows OS. The name is the recursive acronym: Tinn is not Notepad.
- Tinn-R is an extension of the original Tinn editor, providing additional functionality to control R running as Rgui (in SDI mode), Rterm, SciViews R console and JGR. And a whole lot of additional resources.
- Tinn-R can also be thought of as feature-rich replacement of the basic script editor provided with Rgui. It provides syntax-highlighting, code submission as a whole or line-by-line, in addition to many other useful tools to ease the writing and debugging of R code.
- Both Tinn and Tinn-R are distributed under the GPL 2 license or above.

Feedback, suggestions and bug report

Please send your feedback to José Cláudio Faria. If you submit a bug report, please provide as much detail as possible. This includes indicating the Tinn-R version, your operating system (Windows XP, Windows 7, etc), and language (English, French, Portuguese). If the bug is related to an interface with R, please also indicate which version of R you are using, as well as whether you are running Rterm or Rgui. Ideally, please also add the content of the *Tools/Results/Ini log* interface since this will help us address the issue more promptly.

Tinn-R installation

See details ...

Where can I get the latest version of Tinn-R?

- The latest version of Tinn-R can be downloaded from Web page or SourceForge.

How do I install Tinn-R?

- Tinn-R uses a classical method of installation and runs on all versions of the Windows OS. You need administrative rights to install, although you can install it as a regular user provided you have write permission on the directory where you will perform the installation. If you have problems, please contact your computer or network administrator.

- Note that if you install Tinn-R you will likely want to use it along with R, and so R must be installed separately. R can be obtained from here.

.trPaths? (a very recorrent FAQ)

If your version is the same or above 3.0.1.0, Tinn-R does not require any special configuration. That is, the program is ready to be used. One important thing to be done before using it: set a R mirror as close as possible to where you work. For that, first click on `CTRL + F8`. This opens the `Tools` window, then click on `Database/R mirrors`. Select the R mirror and push the button that shows an hourglass in the taskbar database. The chosen repository will be the new default for all actions dependent repository (install packages, upgrade packages, etc).
If you have any version of Tinn-R (<= 2.2.0.2) installed, you need to define your .trPaths correctly in the file `R/etc/Rprofile.site`. With the "new" versions of Windows (Vista, 7 e 8) write permissions are more annoying to deal with, and you have to manually give yourself permission to write to the file/directory, before you can change and save the files. So, to fix it, you have to enable write access to the `Rprofile.site` file and then configure R to run.

- Locate your R install. The default is `C:\Program Files\R\R-X.X\`.

- The file you need write access to is `Rprofile.site`, located in the folder `etc`. A good option is to give write access to all of `C:\Program Files\R\R-X.X\`.

- Select the directory you want to give yourself permission to write in, right click, properties, security, and then it depends on your version of Windows. Once you've enabled writing and saved, you'll need to go back to Tinn-R. In the main menu choice: `R/Configure/Permanent(Rprofile.site)`.

- It should autoload and fix your `Rprofile.site` file.

- The one additional change you would make is to either comment out or change your default repository.

- Usefull links about:

1. Hidden (files and folders)
   - Microsoft
   - Carbonite
   - About.com
   - Computer Hope
2. Permission (files and folders)
   - Microsoft
   - Seven Forums
   - Addictive Tips

Can I get the source code?

- Yes. You can get and modify the source code of Tinn-R as well as redistribute your changes as long as you respect the terms of the GPL license. The source code is available from SourceForge.

How can I add a shortcut to Tinn-R in the start menu or in the desktop?

- This is automatically done by the installer. If you want to do it manually later on, here are the steps:
  1. Under object explorer, right-click the file `Tinn-R.exe` and select `Create shortcut`;
  2. Drag & drop this shortcut to the desktop or wherever you might want to place it.

Can I save or reuse my preferences on another computer?

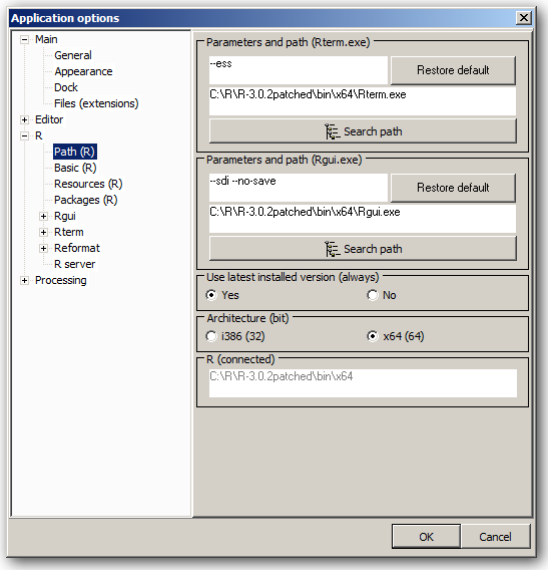
- You have a save/restore configuration tool under `Tools/Backup or Restore system configuration` or `Database`. Just backup your config file on one computer, copy it to the computer where you intend to use the same preferences, then restore them there.
- The restore function assumes that you are using same OS and user name.
- Otherwise:
  1. Unzip the file Tinn-R_X.X.X.X_preferences_bkp in a place of your choice;
  2. Copy the folder Tinn-R;

3. Paste it inside the directory with the Tinn-R folder;
4. To find where that folder is located, from the main menu just select `Help/Main/Ini files (path information)`.

How can I open a file in Tinn-R by double-clicking it under Windows Explorer?

- You need to register Tinn-R as the default program to open files with a given extension. You can either check this option during installation or follow the steps below:
  1. In order to open *.R files (`R` scripts) with Tinn-R, locate one such file in your disk;
  2. Right-click this file and select `Open with/Choose program...` in the context menu;
  3. Click `Browse` in the `Open with` dialog box and then select `Tinn-R.exe`;
  4. Make sure the option `Always use the selected program to open this kind of file` is selected;
  5. Click `OK`.
- Now, when you double-click on a *.R file in the Windows explorer, it will be opened in Tinn-R.

How to define the starting Rgui from within Tinn-R?



- You can start your preferred Rgui directly from Tinn-R. To do that, go to `Options/Application/R/Path`.
- At the bottom of the dialog box, you can determine the path of the Rgui executable to start from within Tinn-R. Select `Rgui.exe` from, for instance, `C:\Program Files\R\R-X.X.X\bin\Rgui.exe`).

```
Note: to use R from within Tinn-R, you must first install it from
http://cran.r-project.org
```

- With Rgui, you must choose SDI mode at Edit/GUI preferences.

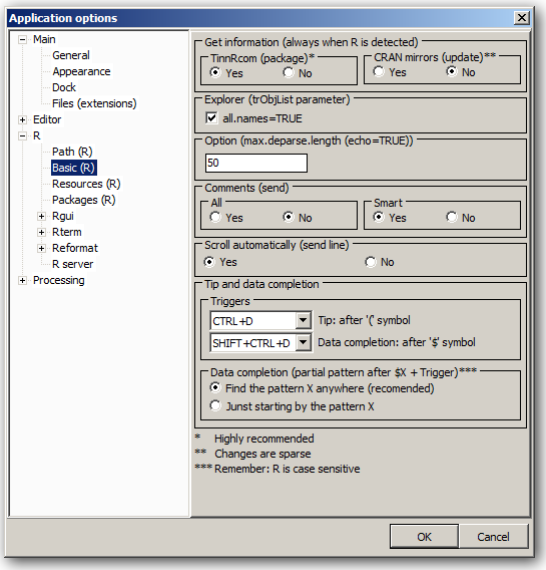
Can I define Tinn-R as the default editor for R objects?

- No, currently, it does not have that capability. In order to do that, just use the internal script editor of Rgui to edit() or fix() R objects.

Can I use Emacs or WinEdt style for syntax highlighting color?

- Just set your preferred color scheme in `Options/Colors (preference)`. To change color scheme on other computers, just use the `Options/Backup/Restore system options` configuration functions (*See details ...*).

What does "Triggers" mean in Options/Application/R/General/Basic?



- Tips are tooltips displaying the syntax of the currently used R function.
- By default, if you enter the name of a function followed by an open bracket such as `sd(` in a R code document, then Tinn-R recognizes that you call the `sd` R function and reminds you of its syntax by showing the following tip: `x, na.rm=FALSE`, that is, `sd` accepts two arguments: `x`, and `na.rm` with the latter having `FALSE` as the default value.
- Tinn-R uses a database with the syntax of most common functions in R. However, neither functions in additional packages nor your custom functions are cached in this database. Adding them all manually is tedious.
- Tinn-R therefore offers a second mechanism: direct requests to R. This is accomplished through DDE and/or TCP/IP protocols, using functions automatically loaded when you start the TinnR package you downloaded from CRAN. (*See details ...*).
- When a tip is showed (Editor, IO or Log interface) it is possible to add all arguments by typing the shortcut `CTRL + *`.

On some computers, the delay for synchronization might need to be adjusted. If Tinn-R seems to freeze while querying R for tips and you get no results, increase the value a bit by setting `Options/Application/Main/-General/Computational synchronization (delay)`.

Can I start R and Tinn-R all at once?

- There are many ways to accomplish this, but here is one: first, configure R so that it undersands that you want to use Tinn-R as your IDE (Integrated Development Environment). In order to do that, start a new R session and add the following command:

```
> options(IDE = "C:/Tinn-R/bin/Tinn-R.exe")
```

  Replace the path by the present location of Tinn-R.exe on your computer if different from the location above. Then you will indicate that you want to start the DDE server automatically by setting (valid only for versions prior to 3.0.1.0, because this communication protocol was deleted from the project, the only one remaining is TCP/IP):

```
> options(use.DDE = TRUE)
```

At this point, Tinn-R will be automatically started when you load svIDE, at the same time as the R call-tip server is installed (valid only for versions prior to 3.0.1.0):

```
> library(TinnR)
```

If those steps work well in manual mode, but you now want them to run whenever you start R, edit the `Rprofile.site` file (located in the \etc\ subdirectory of R. File location varies, but it should be under something like C:\Program Files\R\R-X.X.X\etc\Rprofile.site). Add the above-mentioned three lines of code at the end of the Rprofile file (valid only for versions prior to 3.0.1.0).

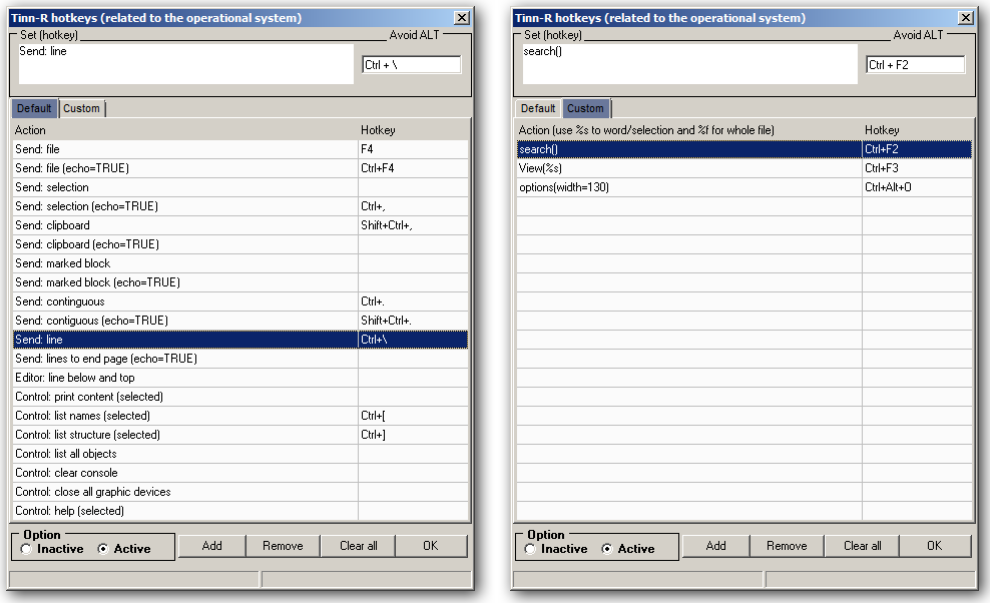
```
options(IDE = "C:/Tinn-R/bin/Tinn-R.exe")
options(use.DDE = TRUE)
library(TinnR)
```

A copy of `Rprofile.site` file created by José Cláudio Faria can be obtained from SourceForge, which you can adapt according to your needs. To make sure that everything works well and smoothly, close both R and Tinn-R and restart R. Tinn-R should start concomitantly. Now, create a very simple function in R such as:

```
> cube <- function(x) x^3
```

Switch to Tinn-R and type: `cube(`. You should get a call-tip displaying `x` if the R call-tip server was correctly installed.

Hotkeys (operational system)



What is the difference between hotkeys (operational system) and shortcuts in Tinn-R?

- The hotkeys are related to the operational system. In other words, they work without the focus on Tinn-R, whereas the shortcuts will only work with the focus on the Tinn-R interface.

How do I define hotkeys for R tools in Tinn-R?

- Go to `R/Hotkeys of R`. Once there, define your favorite hotkeys for the various R tools and make sure to activate them (Option -> Active).

Is there a shortcut for cycling through opened files?

- Yes, you can use `CTRL + TAB` to go to next file, and `CTRL + SHIFT + TAB` to go to previous ones when several files are loaded simultaneously in Tinn-R.

Is there a shortcut for <- and -> for the S/R languages?

- The (non user configurable) shortcut for -> is CTRL + ADD key (numeric keypad). Similarly, CTRL + SUBTRACT (numeric keypad) is a shortcut for <-. -> and <-, all being assignment symbols in the S/R languages.

Miscellaneous

I am editing a table. Can I select text in column mode?

- Yes you can, but you must first make sure that this option is selected. Go to Options/Application/Editor/Advanced options tab and check (x) Alt sets column modes. Once this is done, by pressing Alt key while selecting your text with the mouse in Tinn-R, the selection will be done in column mode.
- Another option is to change the selection mode to column in a permanent way. This is done through the menu Options/Selection mode or by clicking on the selection mode place at the status bar. The available options are: smNormal, smLine and smColumn.

Can I define bookmarks to facilitate the navigation through my documents?

- Yes, you can define up to 10 bookmarks in each of your opened documents. To define the bookmark, use CTRL + SHIFT + [0-9] (a key from 0 to 9). Then, to go to the corresponding bookmark just use CTRL + [0-9]. A visual indicator appears in the right margin at the location of your bookmarks to remind you where they are.

What is the left gutter used for?

- In Tinn-R, bookmarks are visually displayed in the left gutter (use CTRL + SHIFT + [0-9] to set bookmarks and then use CTRL + [0-9] to navigate to them). It also displays the respective line numbers. You must set gutter Visible in Options/Application/Editor/Display tab (and also Show line numbers) to activate this feature.

Can I run my code step-by-step?

- Yes, but for more convenient use of this function, you must place Tinn-R and R side by side on your screen and click on the 'Send line' icon with the mouse (seventh button from the left on the R toolbar).

- If you use a shortcut, you can just submit one line since the R console gets the focus when code is sent to R. Alternatively, you can set Tinn-R as a topmost window on top of R using Options/On top. The downside is that Tinn-R will permanently hide the R console and there is a chance that you won't see a part of the output generated in R during your step-by-step code execution.

Is there a graphical debugger for my R functions?

- Not yet, but you can download the excellent debug package from CRAN and use the mtrace function available from there.

What is the Tools panel?

- It is a panel you can open at either the left or the right side of your text. It helps you to manage large projects with multiple documents. The Computer tab allows you to explore your computer disks and open one or several files without using File/Open, or switching to the Windows file explorer. The Project tab is a convenient manager for all files collected in a given project.

Can I copy and paste syntax highlighted R code in Word/Web/LaTeX?

- Syntax highlighted code enhances the code's visibility. It is convenient in the code editor, but could also be useful for pieces of code presented elsewhere such as in a report, a Web page, or a LaTeX document. Tinn-R allows you to copy the code while keeping syntax highlighting color through Edit/Copy formatted. Three options are available: RTF, HTML and TeX.

How can I fix incorrect icon displays on Windows after I have installed a new version of Tinn-R?

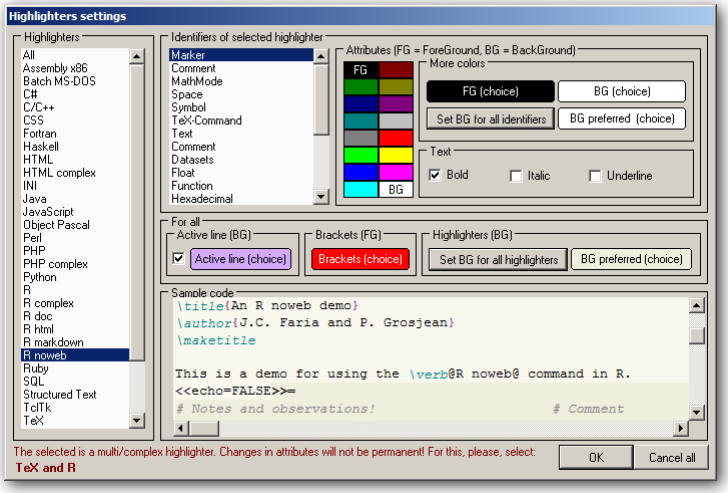
- If you get an incorrect icon displayed on Windows after installing a new version of Tinn-R, just proceed as follows:
  - In order to accelerate the display of program or file icons, Windows stores images in the ICON CACHE (ShellIconCache), a hidden icon cache file in your Windows directory.
  - Sometimes the icon of the object changes, but Windows still shows the old icon instead of the new one. To solve this problem, use the shareware program called IconChanger.

  - If you have just installed Tinn-R with a new icon but Windows has not changed the image yet, use IconChanger and select REBUILD ICON CACHE. If that still doesn't work, then select REMOVE ICON CACHE.
  - If you have selected REBUILD the icon cache will start rebuilding from scratch. If you have selected REMOVE, you will see a warning message. Select YES and then restart your computer.

Basic instructions about focus control:

- Tinn-R has a button within the *Options toolbar* with the hint (*Options: return focus to editor after send/control Rgui*) that enables the user to configure out the focus control. When this option is `checked` Tinn-R will display the following behavior:
  - If the editor has the focus, it will `go back` to the editor after any *send to* or *R control* action, otherwise it will remain on Rgui. This is also true when working with a dual-monitor display.
- If the Rterm has the focus, it will be `maintained` in this interface (*IO*), `disregarding` the *Options: return focus to editor after send/control Rgui*.

Why Tinn-R doesn't remember my syntax color preferences?



Tinn-R has seven multi-highlighters: *HTML complex*, *PHP complex*, *R complex*, *R doc*, *R html*, *R markdown* and *R noweb*, with each one behaving as follows:

```
1. HTML complex = HTML & JavaScript
2. PHP complex  = HTML & JavaScript & PHP
3. R complex    = R & URI ('<<<' begin URI; '>>>' end URI)
4. R doc        = TeX & R ('>>=' begin R; '@' end R)
5. R html       = HTML & R ('<!--begin.rcode' begin R; 'end.rcode-->' end R)
5. R markdown   = URI & R ('```{' begin R; '```' end R)
6. R noweb      = TeX & R ('>>=' begin R; '@' end R)

URI       : Uniform Resource Identifiers.

R complex : The main syntax is R, '<<<' and '>>>' are the tags enabling
            the user to insert a block of URI syntax.

R doc     : The main syntax is TeX, '>>=' and '@' are the tags enabling
            the user to insert a block of R syntax.

R html    : The main syntax is HTML, '<!--begin.rcode' and 'end.rcode-->' are the tags enabling
            the user to insert a block of R syntax.

R markdown: The main syntax is URI, '```{' and '```' are the tags enabling
            the user to insert a block of R syntax.

R noweb   : The main syntax is TeX, '>>=' and '@' are the tags enabling
            the user to insert a block of R syntax.
```

These highlighters do not establish priorities when you set the syntax color preferences. Thus, if you change the color preferences for any of these multi-highlighters these settings will be valid only in the current Tinn-R session and will not be saved when Tinn-R is closed. If you want to make these changes permanent, just set the preferences from all simple highlighters.

How do I set a block as marked?

- **If the file has no marks**: the option will not be available (grayed out);
- **If the file has one or more marks and the cursor is either above the first mark or below the last mark**: all text (above or below this mark) will be submitted in relation to the cursor position (above or below) the mark;
- **If the cursor is between any two adjacent marks**: all text between those two marks will be submitted.

How can I find errors in my script using Rterm interface?

- The `Application options/R/Rterm` is split in two tabs: `Error` and `Options`. The tab Error has an option: `Trying to find code errors (at the editor)*`. It enables the user to set Tinn-R in order to find code errors at the editor when sending instructions to Rterm.
- It may happen that the error will not be found at the right place. For example, the error might be the same word appearing in a comment which comes before the actual code. In that case the user should use the shortcut `F3 (Find again)`. The word will appear selected, than just press *OK* until finding the right error. The first search done internally by Tinn-R has *Case sensitive* and *Whole word only* as default, but, this is not passed to the search interface, therefore the user should just select them if convenient. If the error has numbers among letters *Whole word only* is not a good option.

The comunication between Tinn-R and Rgui seems to freeze!

- **First, it is not necessary to reinstall the Tinn-R nor R**!
- In some Windows flavors the communication between `Rgui` and `Tinn-R` sporadically seems to freeze. The cause of this bug is still unknown to us and seems to be related to the new features of some Windows flavors. However, the solution is very simple: rest your mouse (without pressing for a few seconds) on the icon of the Tinn-R on the taskbar of windows...: the communication should be restored automatically.

CHAPTER 3

WORKING WITH

This section provides information on how to work using Tinn-R.

3.1 APPLICATION OPTIONS

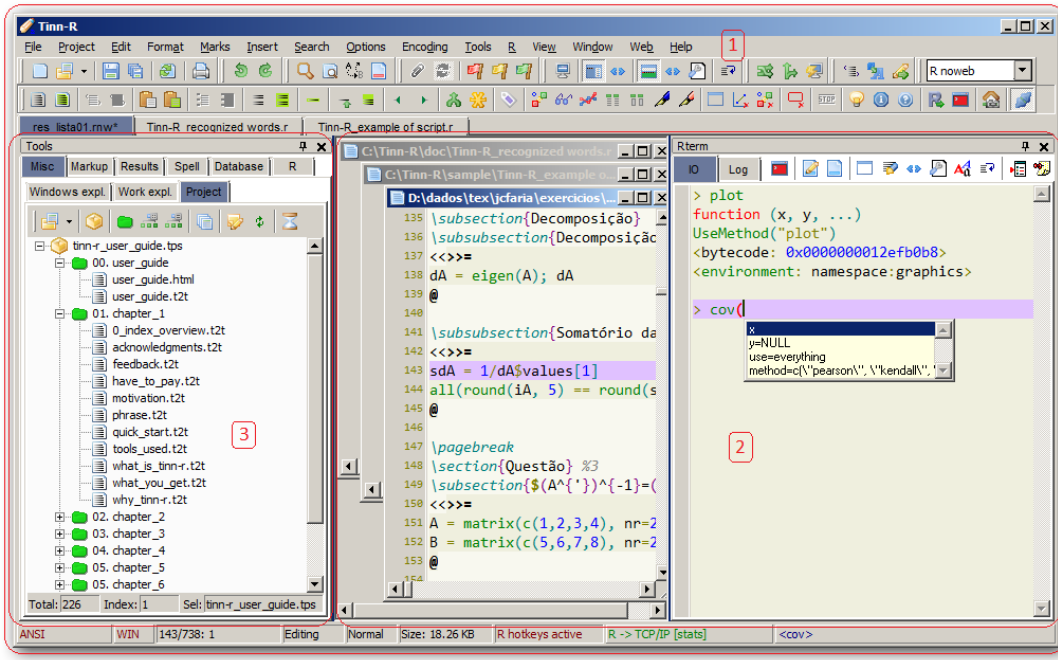


FIGURE 3.1: Tinn-R: Main resources.

Tinn-R interface (Figure 3.1) is very flexible and user configurable. It is necessary time to know all available resources and to configure this out

(according to your preferences) in a nice way. The default set of options might not be suitable for every user.

The window *Application options* allows the user to set the major piece of user preferences related to the application.

It must be clear from now on that the Tinn-R project is the sum of three main resources (Figure 3.1): The application `per se (1)`, the instances of the `SynEdit class (2)` and additional `Tools (3)`, the latest one projected to allows the expansion of resources.

The options visible in all pictures reflect a set of the project coordinator preferences.

Main

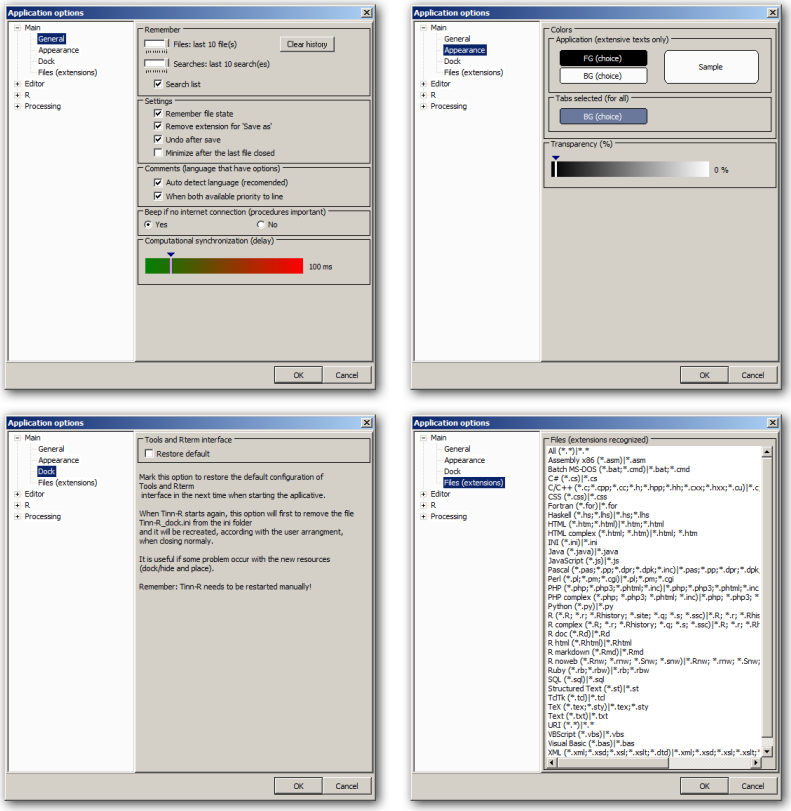


FIGURE 3.2: Main (Options/Application).

Figure 3.2 and Table 3.1 show the options related to this topic.

Option	Description
Computational syncronization (delay)	Several processes are dependent on synchronization between applications (R, converters, compilers). The optimal value of the delay is determined by the following characteristics: user habits, hardware and software available. The ideal value is unique to the various possible combinations of those three characteristics. Try to reduce to the minimum value (50 ms) and test it: if something does not work, increase it gradually and keep testing until getting to the optimal value. The default value (100 ms) may not be optimal for all users.
Remove extension for *Save as*	All file extensions will be removed in the *Save as* Windows interface
Application colors (extensive text only)	Dark colors (low level of radiation) for the background, and pale light (high level of radiation) for the characters are reccomended for people who work with the computer/monitor for long periods. Pictures of this user guide ire like this

Table 3.1: Same main options

Since the options are self-explanatory, Table 3.1 only gives some details about the most difficult options to understand.

R

Figures 3.3, 3.4 and 3.5 shows a set of options available. As you can see, it allows a high level of customization with the R environment.

Processing

There are resources (Figure 3.6 and 3.7) related to conversion (Deplate, Pandoc and Txt2tags) and compilation (Miktex).

Conversion:
Tinn-R project makes it easy to work with these nice conversion tools: Deplate, Pandoc and Txt2tags. (Figure 3.6).

LaTex:
Tinn-R is not a specific editor to LaTeX, but it has the basic resources (Figure 3.7) allowing the user to use the main resources of this environment.

3.2 EDITOR OPTIONS

The *Editor options* window (Figures 3.8, 3.9 and 3.10) was adapted from the sources of the *SynEdit* component, mainly related to the general appearance and standard options. The set of options available complement the *Application options* and allows high level of customization.

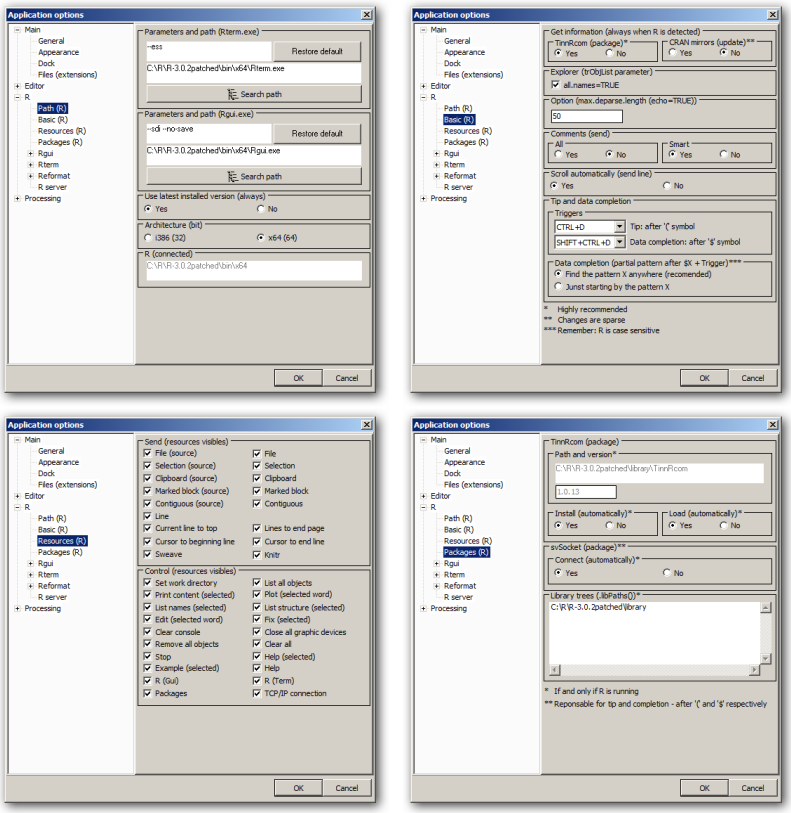


FIGURE 3.3: R (Options/Application).

Display:

Figure 3.8 and Table 3.2 show the main resources.

Advanced options

Figure 3.9 and Table 3.3 show the main resources.

Keystrokes

This interface (Figure 3.10) allows to change the default SynEdit keystrokes. It is possible to make new, edit or remove any ecAction (execute command action). A set of user friendly keystrokes gives high productivity leading with all instances of the main class *SynEdit*: Editor, IO and Log.

Option	Description
Edge column	Will be showed as a vertical line in the editor and the default is 80 characters. Set it to 0 or a negative value (-1) to make the edge column not visible
Edge color	Choice of the edge color
Tab width	Set the number of characters that will be inserted when typing the *Tab* key
Extra lines	Set the width which each single line will be displayed
Font	Will open the Windows interface for choosing installed fonts
Gutter color	Will open the Windows interface to choose a color
Visible	Visibility option
Autosize	Autosize option
Show line number	Show line number option
Start at zero	Start at zero option
Show leading zeros	Show leading zeros option
Use gutter font	Use gutter font option

Table 3.2: Display (Options/Editor).

Option	Description
Auto indent	Will indent the caret (position of the cursor in the current line) on new lines with the same amount of leading white space as the preceding line
Auto size scroll width	Automatically resizes the MaxScrollWidth property when inserting text
Drag and drop editing	Allows you to select a block of text and drag it within the document to another location
Alt sets column mode	Holding down the <ALT> key will put the selection mode into column format
Maintain caret column	When moving through lines w/o cursor past EOL, keeps the X position of the cursor
Want tabs	When active <TAB> and <SHIFT><TAB> act as block indent, unindent when text is selected
Smart tabs	When tabbing, the cursor will go to the next non-white space character of the previous line
Smart tab delete	Similar to Smart Tabs, but when you delete characters
Enhance home key	Enhances HOME key positioning, similar to visual studio
Enhance end Key	Enhances END key positioning, similar to JDeveloper
Hide scrollbars as necessary	If enabled, then the scrollbars will only show when necessary. If you have ScrollPastEOL, then the horizontal bar will always be there (it uses MaxLength instead)
Disable scroll arrows	Disables the scroll bar arrow buttons when you can't scroll in that direction any more
Half page scroll	When scrolling with page-up and page-down commands, only scroll a half page at a time
Scroll by one less	Forces scrolling to be one less
Scroll past end of file	Allows the cursor to go past the end of file marker
Scroll past end of line	Allows the cursor to go past the last character into the white space at the end of a line
Show scroll hint	Shows a hint of the visible line numbers when scrolling vertically
Scroll hint follows mouse	The scroll hint follows the mouse when scrolling vertically
Tabs to spaces	Converts a tab character to a specified number of space characters
Trim trailing spaces	Spaces at the end of lines will be trimmed and not saved
Group undo	When undoing/redoing actions, handle all continuous changes of the same kind in one call instead undoing/redoing each command separately
Right mouse moves cursor	When clicking with the right mouse for a pop-up menu, move the cursor to that location
Show special chars	Shows the special characters
Insert caret	A list with four options: Vertical line, Horizontal line, Half block and block
Overwrite caret	A list with options: Vertical line, Horizontal line, Half block and block

Table 3.3: Display (Options/Editor).

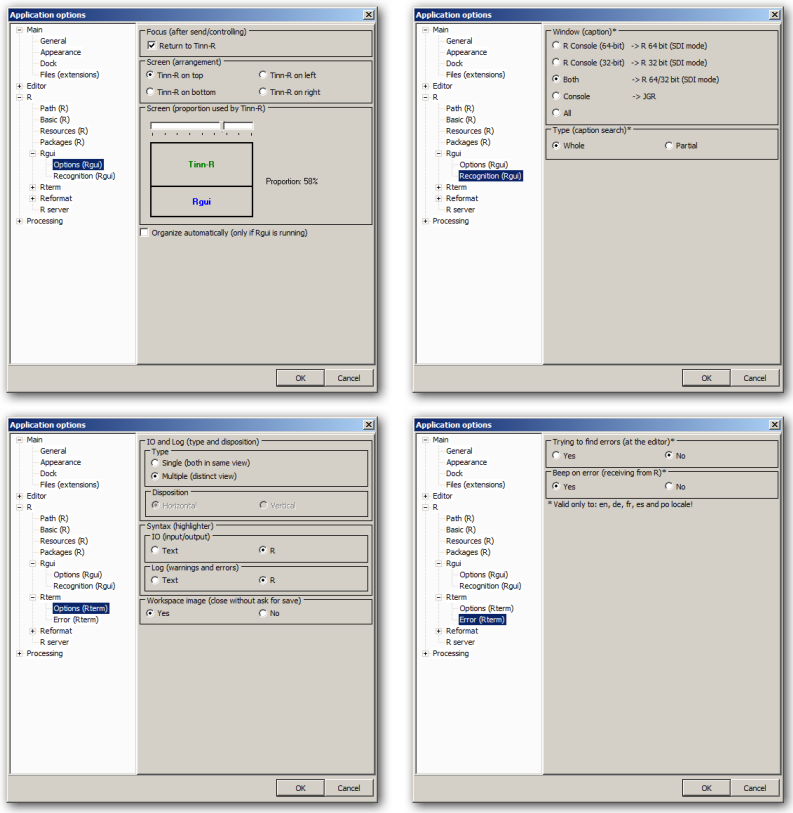


FIGURE 3.4: R (Options/Application).

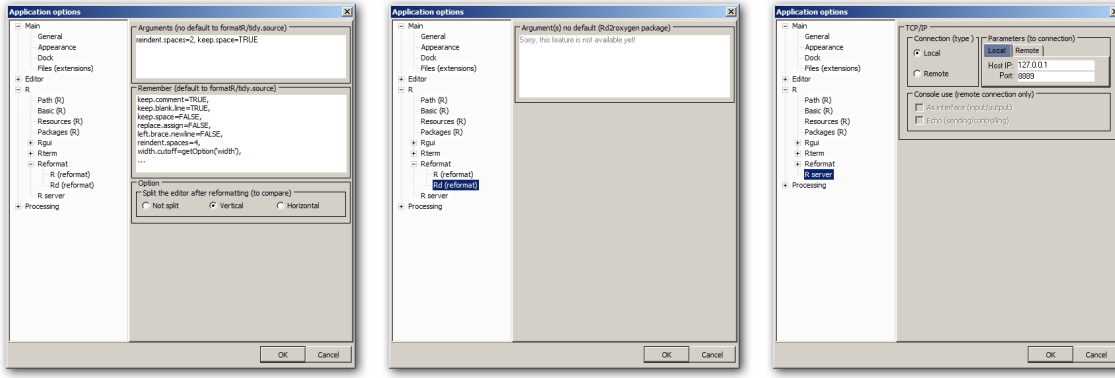


FIGURE 3.5: R (Options/Application).

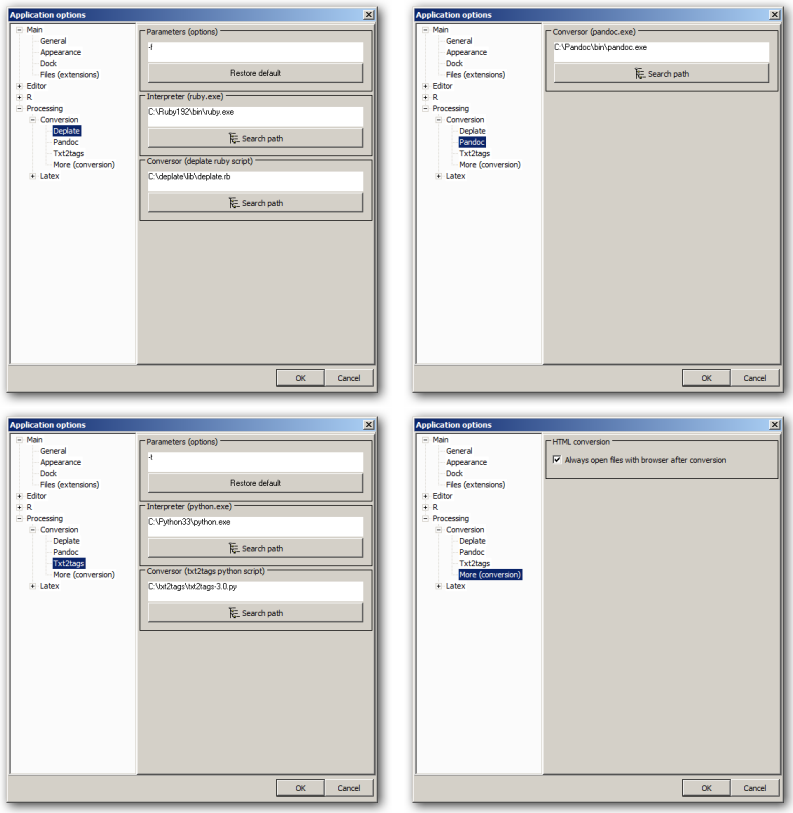


FIGURE 3.6: Conversion (Options/Application/Processing).

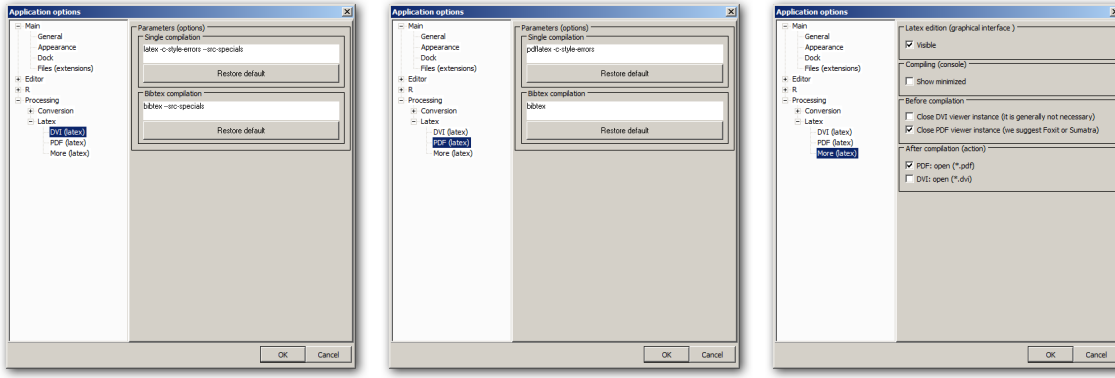


FIGURE 3.7: Latex (Options/Application/Processing).

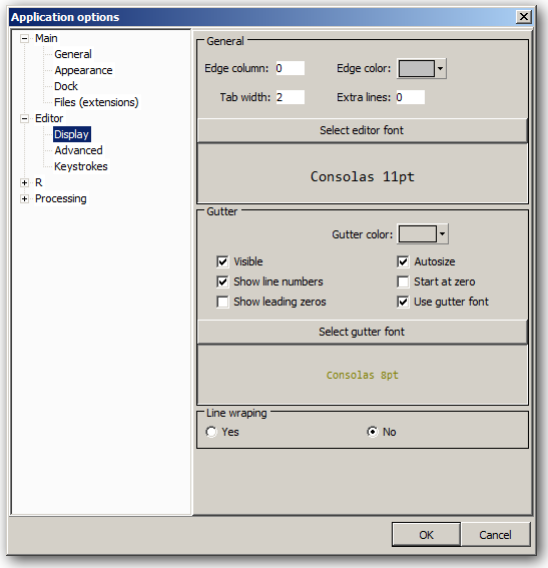


FIGURE 3.8: Editor options: Display.

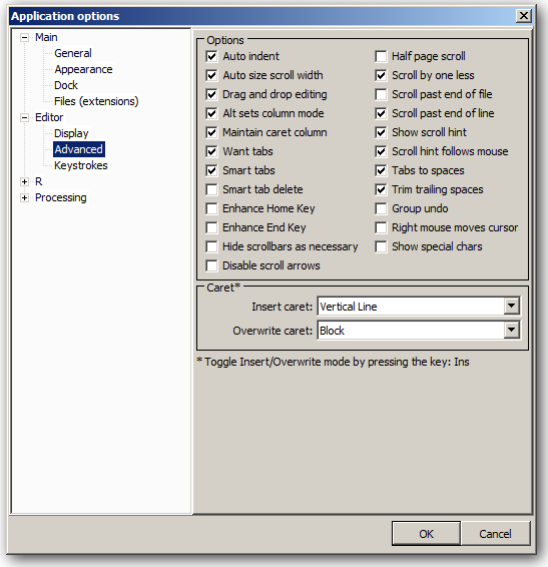


FIGURE 3.9: Editor options: Advanced.

3.3 SELECTION MODE

Allows the setting of the current selection mode (Figure 3.11, 3.12 and 3.13).

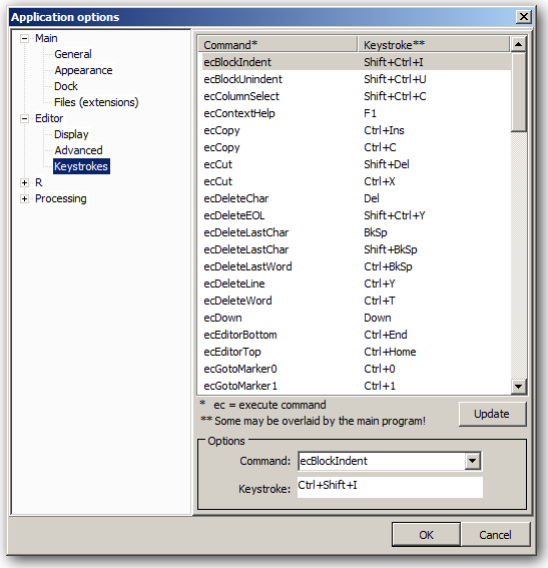


FIGURE 3.10: Editor options: keystrokes.

Select text by clicking and dragging with the left mouse button held down or moving the cursor with the shift key held down. The status bar will display an icon indicating the current selection mode.

Normal

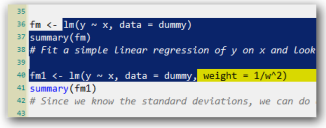


FIGURE 3.11: Normal (selection mode).

This is the standard selection mode (Figure 3.11) found in many Windows applications.

Line

This selection mode (Figure 3.12) allows only for complete lines to be selected.

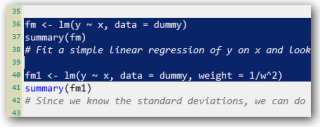


FIGURE 3.12: Line (selection mode).

Column

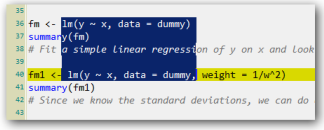


FIGURE 3.13: Column (selection mode).

This selection mode (Figure 3.13) allows vertical blocks of text to be selected. The option ALT sets column mode allowing the selection mode to be switched to Column Mode when selecting with the mouse by simply holding down the ALT key. See details at editor (advanced options).

3.4 HIGHLIGHTERS (SETTINGS)

This interface (Figure 3.14) allows you to customize the appearance and colors of the instances of the class *SynEdit* (Editor, IO and Log).
The interface is simple and self-explanatory.
Basically, make a choice between the set of highlighters available from the *Highlighters* list. The identifier of the selected highlighter will be updated.
It is possible to set only one foreground attribute each time. But it is possible to set the background for all attributes of the selected highlighter and also the background of all attributes of all highlighters.
It is also possible to set the color brackets and the active line background.

Observation: Tinn-R has seven multi-highlighters: *HTML complex*, *PHP complex*, *R complex*, *R doc*, *R html*, *R markdown* and *R noweb*, with each one behaving as follows:

1. HTML complex = HTML & JavaScript
2. PHP complex = HTML & JavaScript & PHP
3. R complex   = R & URI ('<<<' begin URI; '>>>' end URI)
4. R doc   = TeX & R ('>>=' begin R; '@' end R)
5. R html   = HTML & R ('<!--begin.rcode' begin R; 'end.rcode-->' end R)
5. R markdown   = URI & R ('```{' begin R; '```' end R)

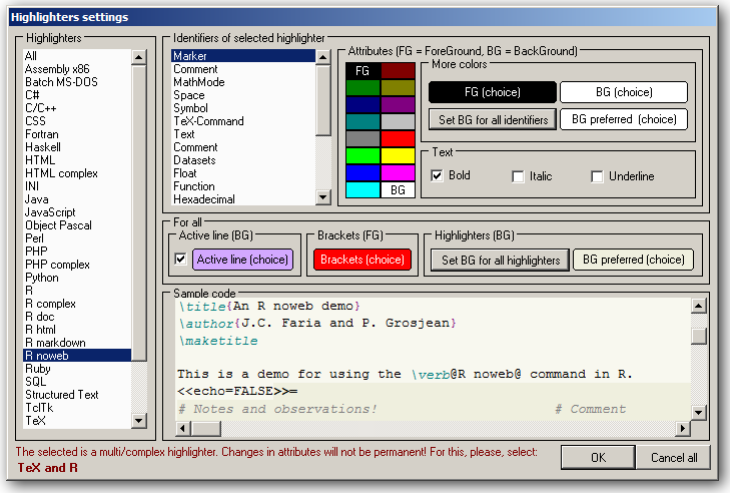


FIGURE 3.14: Highlighter preferences.

```
6. R noweb      = TeX & R ('>>=' begin R; '@' end R)

URI       : Uniform Resource Identifiers.

R complex : The main syntax is R, '<<<' and '>>>' are the tags enabling
            the user to insert a block of URI syntax.

R doc     : The main syntax is TeX, '>>=' and '@' are the tags enabling
            the user to insert a block of R syntax.

R html    : The main syntax is HTML, '<!--begin.rcode' and 'end.rcode-->' are the tags enabling
            the user to insert a block of R syntax.

R markdown: The main syntax is URI, '```{' and '```' are the tags enabling
            the user to insert a block of R syntax.

R noweb   : The main syntax is TeX, '>>=' and '@' are the tags enabling
            the user to insert a block of R syntax.
```

These highlighters haven't priorities when you set the syntax color preferences. Thus, if you change the colors' preferences of any of these multi-highlighters these settings will be valid only in the current Tinn-R session and will not be saved when Tinn-R is closed. So, if you want to make permanent changes, set the preferences from all simple highlighters.

From version 3.0.1.0 a warning message is displayed whenever a multi-highlighter is selected. It shows which highlighters the user must change

the characteristics so that they are properly stored and henceforth always displayed.

3.5 SHORTCUTS CUSTOMIZATION

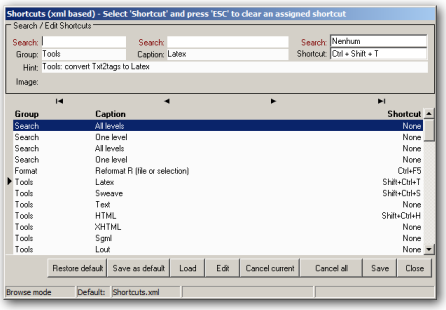


FIGURE 3.15: Shortcuts customization.

The *Shortcuts customization* (Figure 3.15) allows the user to set the shortcuts related to the application, it works together with the *Editor keystrokes*, and allows for high level of customization.
The difference between *Shortcuts* and *Hotkeys (operational system)* is that the former works only with the focus on Tinn-R, whereas hotkeys work with the focus anywhere.
Read below a brief description of available buttons.

Restore default: Restores the file `Shortcuts.xml` from the origin (InstallPath/data/data.zip). Any prior changes to the file `Shortcuts.xml` in use will be lost.

Save as default: Opens the save dialog allowing to save the file. From this point, this file will be the new default shortcuts.

Load: Opens the open dialog allowing to load a shortcut file. From this point on, this file will be the new default shortcuts.

Edit: Sets the table in edition mode.

Cancel current: Cancels any changes made to the current edition.

Cancel all: Cancels all changes made to the database prior to *Save* or *Save as default*.

Save: Saves to text file (XML) all changes made to the current table.

Close: Closes the dialog. All changes not saved will be lost.

3.6 HOTKEYS (OPERATIONAL SYSTEM)

The *Hotkeys (operational system)* (Figure 3.16) allow setting the hotkeys related to the operational system. The difference between those hotkeys

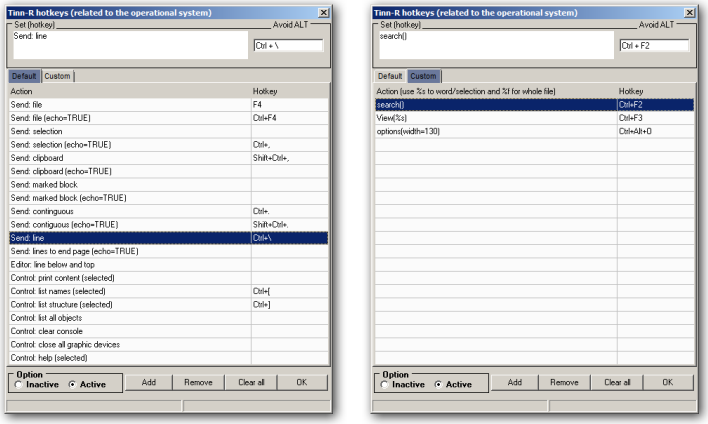


FIGURE 3.16: Hotkeys.

and *Shortcuts customization* is that the latter works only with the focus in Tinn-R, whereas the hotkeys work with the focus anywhere.
The interface is self-explanatory. Basically you first make a choice from the *R/Hotkeys (operational system)* and set the desired Hotkey.
The set of hotkeys will perform actions only if the option *Active* is checked. The objective of these options (*Inactive* and *Active*) is to avoid conflict with others applications allowing to enable/disable the set of hotkeys quickly and easily.
The `R/Hotkeys` interface was deeply reworked in the version 2.4.0.0 and it now has two tabs, `Default` and `Custom`:

- `Default`: Contains the already traditional instructions of Tinn-R;
- `Custom`: **Allows the user to customize any instructions** to be send to R interpreter (thanks to Philemon Lenherr for the suggestion). The instructions must be as follows:
  - Simple: `search()`. The R interpreter will receive > `search()`;
  - Replace word or small selection: `View(%s, title='View of iris dataset')`. If the editor cursor is over the word `iris` or it is selected, the R interpreter will receive > `View(iris, title='View of iris dataset')`
  - Replace whole file: `source(%f, echo=TRUE, verbose=TRUE)`. The R interpreter will receive > `source(.trPaths[4], echo=TRUE, verbose=TRUE)`. All rules related to send file are preserved.

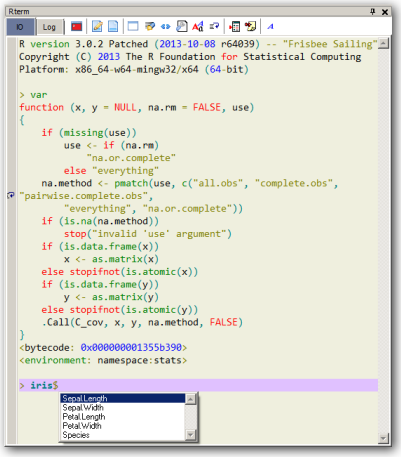


FIGURE 3.17: Rterm interface.

3.7 RTERM INTERFACE

The implementation of a Rterm interface (Figure 3.17, 3.18 and 3.19) in Tinn-R has the following aims:

- To address some limitations (edition, navigation and control) imposed by the Rgui.exe interface;
- To add more flexibility and power to the GUI/Editor;
- To maintain the prior user knowledge associated with Tinn-R editor and the Rgui console;
- To maintain the structural simplicity of the application;
- To use a more efficient engine of Inter Process Communication (IPC) than the Windows clipboard used in previous versions.

The *IO* (Figure 3.18) and *Log* (Figure 3.19) interfaces are instances of the class SynEdit. In other words, all prior user knowledge of the resources associated with the editor were preserved:

- Free navigation with keyboard keys;
- Marks;
- Shortcuts;
- Syntax;

- Match brackets;
- Tips;
- Data completion;
- Edition: copy, paste, cut, etc;
- Selection/copy/paste in column mode: `ALT + drag the mouse`, if this option is checked (see editor options), etc.

1. *IO* (Figure 3.18): The aim was to add flexibility and power, i.e., joining the power of SynEdit (editor) and the functionality of a common console.
2. *Log* (Figure 3.19): Has three basic objectives:
   a) To receive and show warnings and error messages;
   b) To make the *IO* interface cleaner;
   c) To avoid synchronization difficulties with the inter process communication (IPC) called *pipe* used.

When more than one recognized instance of R is running the priority order is:

1. Rterm;
2. Rgui;
3. Rserver (remote);

IO

The *IO* interface (Figure 3.18 and Table 3.4) is used to receive output (SDTOUT) from the R environment.
It is necessary to adjust some R options (for example: `options(width=70)` to obtain a suitable number of characters in each single line, according to hardware and user preferences (side of *IO*, place of *IO*, length of *IO*, width of *IO*, type and size of font). Once you get a suitable result, it is a good practice to add this option to the `Rprofile.site` (located inside of the folder *etc* where the R was installed) file. Thus, your option will always be set when starting R.
The IO is an instance of SynEdit. Therefore, it can be edited and used like the editor, allowing the tasks showed in the Table 3.4.
If the *IO* has the focus, all actions of the R toolbar and main menu associated with control R can be used in the IO interface.

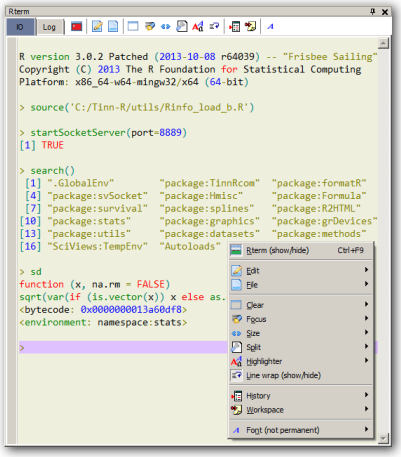


FIGURE 3.18: IO (Rterm interface).

Resource	Description
Edition	All resources available to the editor (copy, paste, cut, etc) can be used
Free navigation	Using keyboard keys: Home, Page Up, Page Down, End, Left, Top, Right and Bottom
Marks	`CTRL + [0..9]` can be used to mark, `SHIFT + CTRL + [0..9]` to go to prior marks
Shortcuts	All shortcuts available to the editor are also to the IO
Syntax	Two options: Text and `R`
Match brackets	Makes it easier to build more complex instructions like `plot(sqrt(rnorm(1e3)), pch='.', cex=3)`
Tips	Are invoked using the same trigger as the editor
Data completion	Are invoked using the same trigger as the editor

Table 3.4: IO interface, main resources available.

The *IO* interface has a special pop-up menu allowing the most common tasks. It is self-explanatory. So, make a small tour (right mouse button inside of Rterm/IO) to find out about its options.
Some details:

- Shortcuts and pop-up menu make it easy to change among the interfaces: *Editor*, *IO* and *Log*:

    1. if *IO* and *Log* are in distinct tabs (views), the common Windows shortcut `CTRL + TAB` changes the active page (IO-Log).
    2. Any prior line can be sent another time by just putting the cursor in any place of it and typing: `CTRL + ENTER`;

- The last line of the *IO* interface (the prompt) has special features:

    1. It has some restrictions for edition and navigation;
    2. `ALT+DOWN` and `ALT+UP` are the shortcuts (prior/later) for command history. The history is continuous, cyclic, and have a 100 line limit.

Log

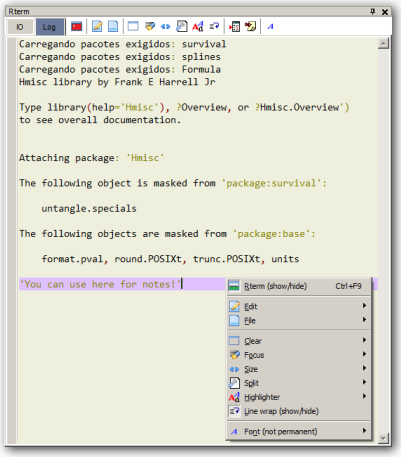


FIGURE 3.19: Log (Rterm interface).

The *Log* interface (Figure 3.19) is used to receive warnings and error messages (SDTERR) from the R environment.
It has a special pop-up menu that allows the most common tasks. It is self-explanatory. So, take a small tour (right mouse buttom inside of Rterm/Log) to know all options.
Most of the resources available to the *IO* are also available to this interface.

3.8 TOOLS INTERFACE

This graphical interface (Figure 3.20) was projected to allow access to Tinn-R resources and also to accommodate future growth of related news resources.
Position: starting from version 2.1.1.1 (Oct/15/2008) this interface is dockable. It can float or be docked on the left, top, right, or bottom sides of the main interface.

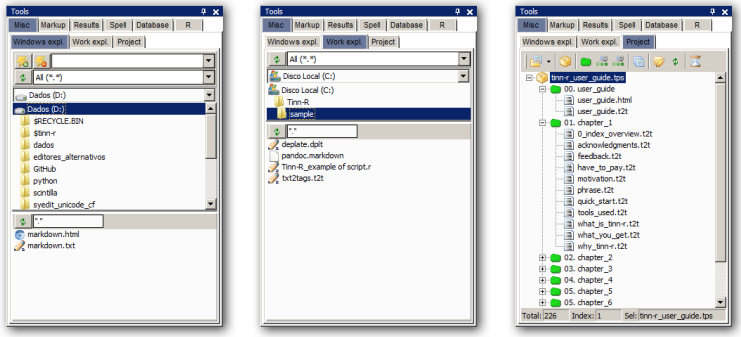


FIGURE 3.20: Tools interface.

Tool	Description
Windows expl.	*See details ...*
Work expl.	*See details ...*
Project	*See details ...*

Table 3.5: Misc (tools)

Misc

The resources are showed in Figure 3.20 and Table 3.5.

Windows expl.:
See Figure 3.20.

- Allows manager favorites (add and remove);
- Allows filter by file extension;
- Has pop-up menus similar to Windows explorer;
- Support drag and drop actions (it is possible to drag any file and drop it on the editor interface to be opened).

Work expl.:
See Figure 3.20.

- Always shows the folder related to the latest file opened;
- Does not have a pop-up menu;
- Supports drag and drop actions, i.e, it is possible to drag any file and drop it in the editor interface that will be opened.

Tool	Description
Txt2tags	Sets marks, macros and settings of Txt2tags convertor
Latex	Sets LaTeX symbols settings in a customizable manner

Table 3.6: Markup (Tools).

Project:
See Figure 3.20.

- Allows for project management using a graphical interface;
- Supports drag and drop actions, ie, it is possible to drag the entire project, groups, or any file and then drop them into the editor interface that will be opened:
  - Project: will open all files related to the current project;
  - Group: will open all files for the selected group;
  - File: will open the selected file.
- It is possible to send an entire project, a selected group, or an individual file to the R environment through a pop-up menu.
- Source file of project:
  - It is possible to edit the project in text mode (with the button *Project: edit (as text file)* of the specific toolbar). After any change, save the text file (it contains the textual description of the project structure) and reload the file to the graphical interface (with the button *Project: reload (from text file)* of the specific toolbar).
  - Any changes to the graphical interface will be reflected in the text file for the project, after it is saved.
  - The best way to work with projectis (graphics of textual mode) depends on the complexity of the actions and the user preference. For single tasks, we suggest that you use the graphical mode. For complex actions, it is faster to use the textual mode with all editor resources.

Markup

It contains resources (Figure 3.21 and Table 3.6) related to the Txt2tags and LaTeX.

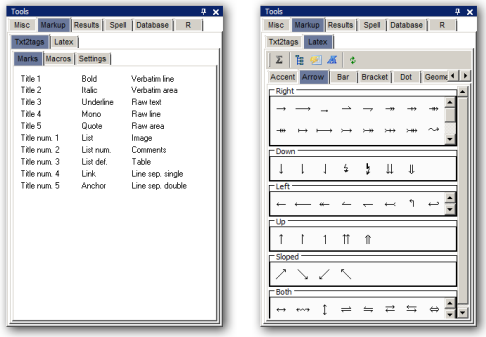


FIGURE 3.21: Markups (Tools).

Tool	Description
Ini log	Displays useful results when starting Tinn-R
Search	Interface for *Search* results associated with *Search in files*

Table 3.7: Results (Tools).

Txt2tags:
Sets (Figure 3.21) marks, macros, and settings for the Txt2tags convertor. A single click over any graphical will add it to the current editor.

LaTeX:
Set (Figure 3.21) of LaTeX symbols. A single click over any graphical object will add it to the current editor;
The symbols, place and order of all symbols are customizable. To customize them, open the folder *latex* and edit *ini* path. At the end of the edition, update the interface using the button *Latex: reload symbols (from ini)*. Be careful when editing the symbols to maintain the name structure. For example: `Number_SymbolName.FileExtension`, `001_alpha.gif`, `002_beta.gif`. The number will be used to order symbols in the graphical interface, while the name will be used (if recognized) as a LaTeX symbol.

Results

It contains resources (Table 3.7) related to *Ini log* and *Search*.

Ini log:

Displays (Figure 3.22 and Table 3.8) useful results when starting Tinn-R.

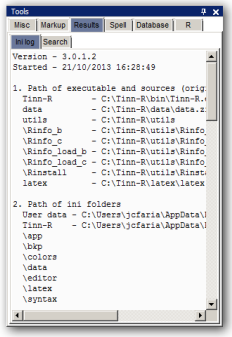


FIGURE 3.22: Inilog (Tools/Results).

Topic	Description
Path of executable and sources (origin)	Lists executable files and resources
Path of ini files	Lists the path of all folders of the ini
Verification of necessary folder and files	Lists the status of folders and files of ini
Tinn-R, bkp, colors, ini, syntax and syntax bkp	Lists the status of these folders
Custom (version)	Lists the status of this folder and files
Data (version)	Lists the status of this folder and files
Latex (version)	Lists the status of this folder and files
Shortcuts (version)	Lists the status of this folder and files
Unihighlighter (version)	Lists the status of this folder and files
Tmp	Lists the status of this folder

Table 3.8: Ini log

If you submit a bug report, please also send the results for the respective page by copying & pasting.

Search:

The interface (Figure 3.23) for *Search* results associated with *Search in files*.
The results for the *Search in files* actions are displayed as a tree with all files. Double click the file to open it in the editor interface.

Spell

Tool	Description
Spell	Interface to speller

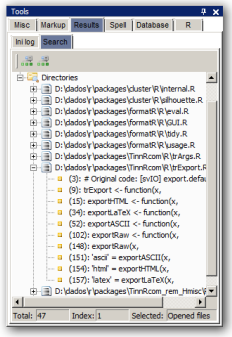


FIGURE 3.23: Search (Tools/Results).

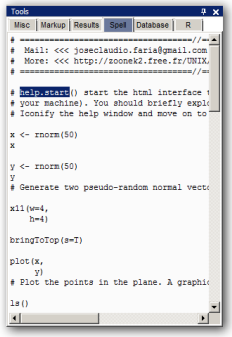


FIGURE 3.24: Spelling (Tools).

Tool	Description
Shortcuts	A digital shortcuts interface based in a XML database
Completion	A digital completion interface based in a XML database
Comments	A digital comments interface based in a XML database
R card	A digital and simple R card based in a XML database
R tip	A digital and simple R tip based in a XML database

Table 3.9: Database (Tools)

To enable spellchecking with Tinn-R it is necessary to install at least one dictionary of the list of available ones. It is also a good idea to install the dictionary manager. See instructions ....

Database

The database (Figure 3.35 and Table 3.9) uses the native XML engine provided by Borland. Each tab (*Shortcuts*, *R card*, *R tip* and *Completion*) has its own pop-up menus and toolbars.

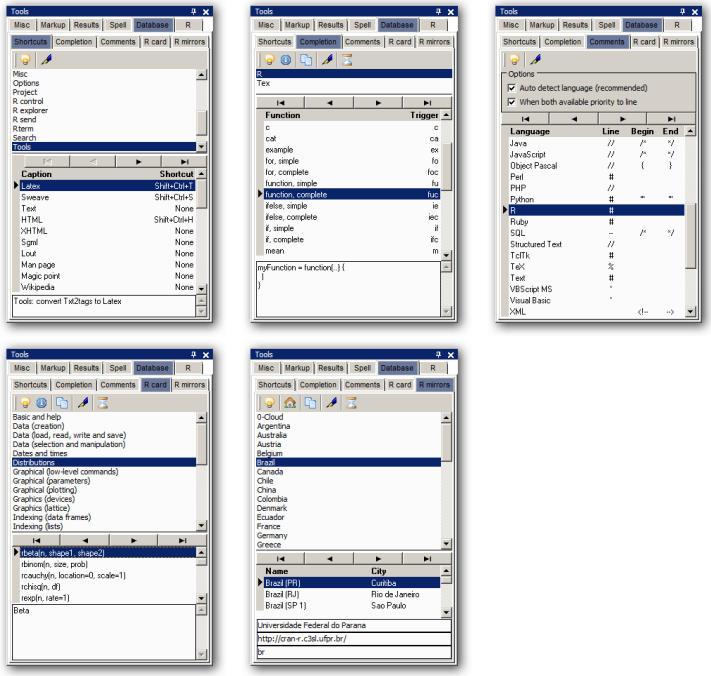


FIGURE 3.25: Database (Tools).

Shortcuts:
The *Shortcuts* interface allows the user to find out about the internal organization of Tinn-R and also to customize all shortcuts related to the application. It is our intention, in the near future, to add additional keystrokes related to the editor and to the R hotkeys.

Completion:
The *Completion* resource is very simple and allows high level of user customization related to edition. The old implementation of completion resource showed instability and was replaced. We hope that the users will like this new one.

Comments:
The *Comments* resource is very simple and allows high level of user customization.
From version 3.0.1.0 Tinn-R automatically recognizes the language of the file on focus. Further, inside the file - if it is a syntax a multi-highlighter (complex syntax) - which language of the line where the cursor (or selection) is found.

This identification is done automatically if (and only if) the option *(x) Auto detect language (recomended)* is checked. Otherwise the user is forcing the application to use the comments of the selected language (indicator arrow).
Selected code snippets involving more than one language will not be commented/uncommented and a warning message is issued. That is, you must select only the snippet of a single language.

R card:
The *R card* was based on two R cards already published: R/Rpad Reference Card by Tom Short and R reference card by Jonathan Baron.

R mirrors:
The *R mirrors* is an interface that allows the user to manage the repositories (or mirrors) of R. You should always choose a repository physically closest to where you are, so that, the Web communication tends to be faster and more efficient.
The default mirror is the University Wien (Austria). Consider that this is the central mirror of CRAN.
The reasons for the Tinn-R always set a repository (assets) are two: begin itemize item Prevent R keep asking which repository you want to use in each session; item Workaround of intermittency (only Rterm) display the dialog for selecting the repository. That is, sometimes the dialog is displayed and not others. The cause of this intermittency is still unknown. end itemize
Os motivos do Tinn-R sempre definir um repositório (ativo) são dois:

- Evitar que o R fique perguntando qual repositório você deseja usar em cada sessão;
- Contornar o problema da intermitência (apenas com Rterm) da exibição do diálogo para a escolha do repositório. Ou seja, algumas vezes o diálogo é exibido e em outras não. A causa dessa intermitência ainda é desconhecida.

Definir um repositório de sua preferência o mais próximo possível (pais e região) de onde você se encontra é procedimento recomendado! Na interface Tools/R mirrors existe um botão como uma ampulheta que torna esse procedimento trivial, bastando escolher o repositório e pressionar esse botão. De agora em diante o escolhido será o novo default para todas as ações que envolvam o repositório: instalar pacotes, atualizar pacotes, etc.
Os repositórios do R sofrem relativamente poucas alterações com o passar do tempo. Assim, o database Rmirros.xml não precisa ser atualizado

Tool	Description
Explorer	Simple and functional graphical interface of objects of the R environment

Table 3.10: R explorer (Tools).

com muita frequência. Contudo, existem opções que fazem a atualização automaticamente sempre que o usuário julgar necessário:

- Botão cujo ícone é uma casa na barra de tarefas Tools/Database/R mirrors;
- Menu R/Update mirrors.

R

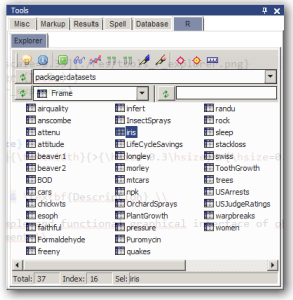


FIGURE 3.26: R explorer (Tools).

A simple and functional graphical interface (Figure 3.26 and Table 3.10) of objects of the R environment.

R explorer:
This interface (Figure 3.26) has its own pop-up menu, toolbar and three combo box. The pop-up menu and toolbar contain the most common actions related to an object explorer.
The button *R explorer: refresh environment* sends an instruction to R environment requesting the list of all loaded packages in the current session. The result is shown inside a graphical classified list. When one of these is selected, the graphical list (and structure) of the objects are shown.
There are two options of filter: type of objects and any sequence of characters associated with the names of the objects.

It is possible to remove visible objects of the user workspace (.GlobalEnv) using the key *Delete*. To do this, select an object and type *Delete*.
A double click in any selected object will add its name to the editor. If the object is dragged to the editor interface, the textual description of the object is always shown in a new file. It is useful to know the sources of functions and to see data objects (vectors, frames, list, etc).

3.9 FILE TABS

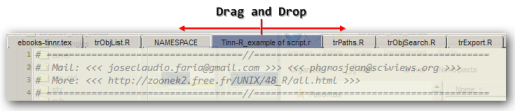


FIGURE 3.27: File tabs.

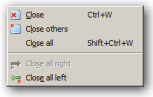


FIGURE 3.28: File tabs menu.

The position of the file tabs (Figure 3.27) can be changed by drag and drop. It allows to put the file tab in a desirable order making it suitable for the user interface.
The file tabs have itheir own pop-up menu (Figure 3.28) allowing fast control of the most common tasks.

3.10 TOOLS BAR

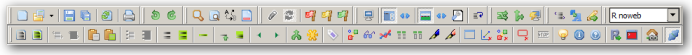


FIGURE 3.29: Tools bar.

Unlike most applications of this category, this interface (Figure 3.29) was designed to be as small and simple as possible. In other words, the full access to all resources of Tinn-R are available at the main menu and associated shortcuts (it takes time to learn all and most are user configurable). Two groups are available: main and R tool bar.

Category	Description
File	New, open, save, save all, reload and print
Edit	Undo and redo
Filter	Create a new file with all occurrences of typed sequence of characters
Macro	Record and play
Misc	On top, focus control and block marks
Processing	Conversion, compilation and viewer
R	Lots of options to send and control R
Search	Current file, in files, replace and go to line
Syntax	Drop down list of all syntaxes available
Spell	Drop down list of installed dictionaries and a bottom to start the speller
View	Organize screen, Tools (show/hide), Tools (size), Rterm (show/hide, Rterm (size), options to *IO* and *Log* and word wrap

Table 3.11: Tools bar.

The main toolbar interface is categorized (Table 3.11) and contains the most common tasks:
The R toolbar has two basic divisions: Send (left side, finishing in the *Set work directory buttom*) and Control (right side, starting in the *List all objects buttom*).

Show/Hide

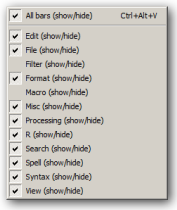


FIGURE 3.30: Tools bar menu.

The Tools bar has its own pop-up (Figure 3.30) menu enabling the user to choose what resources will be visible (show/hide). To see the pop-up menu, press the right mouse buttom inside any place of the main tool bar.

Disposition

The interface also allows drag and drop. In other words, you can organize the order of the individual tool bar inside of the main container.

It is better to do that with the main interface not maximized to avoid screen flicker (a small nuance related to some version of the Windows and Borland engine).

3.11 FIND AND REPLACE

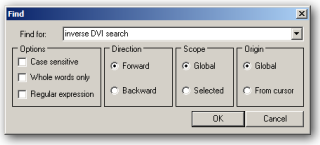


FIGURE 3.31: Find and replace menu.

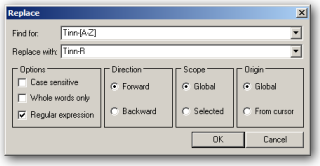


FIGURE 3.32: Replace menu.

The dialogs for *Find* (Figure 3.31) and *Replace* (Figure 3.32) are very similar, so this session will just discuss the *Replace* dialog and will point out the changes when necessary.

Find

When you call up the *Find* dialog (Figure 3.31) the *Find for* box will be prefilled with the word under the cursor. You can type over the entry if you are looking for another word. There is also a dropdown list of phrases previously searched.

Replace (Replace dialog only)

When you call up the *Replace* dialog (Figure 3.32) the *Replace with* box will be filled with the last string you entered in it. If this is the first time you have called the *Replace* dialog since starting Tinn-R then the Replace box will be empty. You can type over any text in box. There is also a dropdown list of strings previously used.

Options:

Case sensitive: When this option is set the search is done case sensitively. For instance, `Ab`, `AB` and `ab` are all treated as different words whereas they are not if the option is not set.

Whole words only: When this option is set the system will only find complete words matching the search criteria. So, for example, if `ab` is the search string the system will not match occurrences of words like `abc` or `cab`.

Regular expressions: See regular expressions ...

Direction:
The direction to search. This option is ignored if searching in selected text.

Forward: Search from the cursor position to the end of the file.

Backward: Search from the cursor position to the beginning of the file.

Scope:

Global: Search the entire file.

Selected Text: Search just the selected text.

Origin:

Global: Search from the beginning of the file.

From cursor: Search just from the position of the cursor.

3.12 SEARCH IN FILES

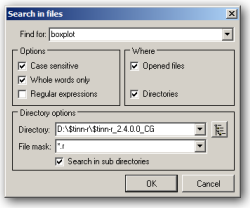


FIGURE 3.33: Search in files menu.

The *Search in files* dialog (Figure 3.33) allows you to match a criteria in all opened files and/or in files on disk.

Options

Case sensitive: When this option is set the search is case sensitive. For example, `Ab`, `AB` and `ab` are all treated as different words.

Whole words only: When this option is set the system will only find complete words matching the search criteria. For example, if `ab` is the search string the system will not match occurrences of words such as `abc` or `cab`.

Regular expressions: See regular expressions ...

Where

Opened files: When this option is set the search is performed on all opened files.

Directories: When this option is set the search is performed in disk files.

Directory options

Directory: A dropdown list of previously searched directories.

File mask: A dropdown list of the previously searched file mask.

Search in sub directories: When this option is set the search is performed on all sub directories of the main directory.

Results interface

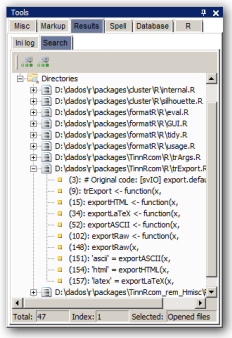


FIGURE 3.34: Search in files results.

The associated results interface (Figure 3.34) shows the results.
A double click in a single occurrence (or dragging and dropping it into the editor interface) will open the file and results will be placed in the first line of the editor window.

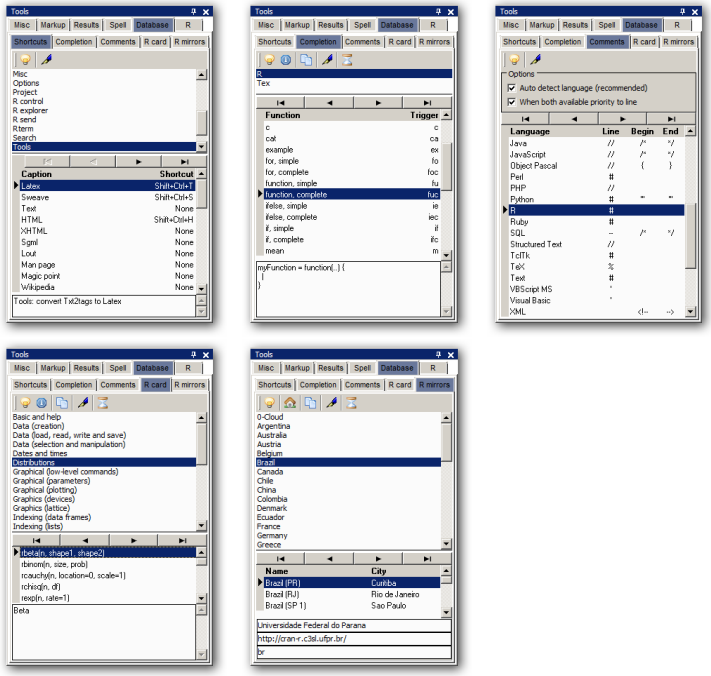


FIGURE 3.35: Database (Tools).

3.13 DATABASE

This interface (Figure 3.35) contains resources related to the internal Tinn-R database. Each tab (*Shortcuts*, *R card*, *R tip* and *Completion*) has its own tool bar and pop-up menu allowing for a fast control of the most common tasks.

Shortcuts

The available buttons (Figure 3.35) are:

Help: It opens the *User Guide* on the section about the selected topic.

Edit: It opens the dialog *R card database (xml based)* below.

The *Edit* button opens the dialog shown in Figure 3.36.
Read below for a brief description of available buttons:

Restore default: Restores the file `Shortcuts.xml` from the origin (Install-Path/data/data.zip). Any prior changes to the file `Shortcuts.xml` currently being used will be lost.

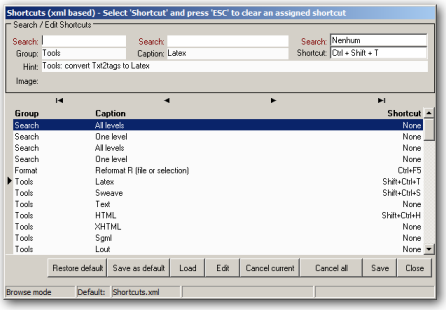


FIGURE 3.36: Shortcuts (Database).

Save as default: Opens the save dialog allowing you to save the file. From this point on, this file will be the new default shortcut.

Load: Opens the open dialog allowing you to load a shortcut file. From this point on, this file will be the new default shortcut.

Edit: Places the table in edition mode.

Cancel current: Cancels any change made to the current edition.

Cancel all: Cancels all changes made to the database prior to *Save* or *Save as default.*

Save: Overwrites the text file (XML) saving all changes made to the current table.

Close: Closes the dialog. All non-saved changes will be lost.

Completion

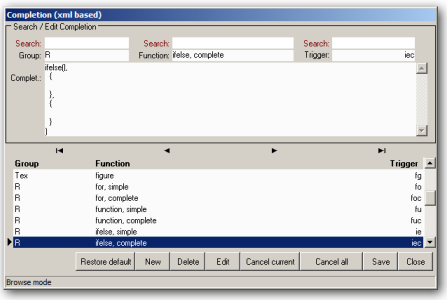


FIGURE 3.37: Completion (Database).

This resource adds a granular level of user customization for editing functions within Tinn-R.
The completion (database based) allows the user to add functions based on several programming languages such as R, TEX, among others.

The available buttons (Figure 3.35) are:

Help: Sends the following instruction to R: `help('selected function')`.

Example: Sends the following instruction to R: `example('selected function')`.

Copy function: Places the selected function in the clipboard.

Copy description: Places the description of the selected function in the clipboard.

Edit: Opens the dialog *Completion database (xml based)* below.

Insert: Inserts the selected function in the active editor. A `Double click` or `Enter` performs the same function. The default shortcut is `CTRL + J`, but this can be customized under *Options/Shortcuts* or *Tools/-Database/Shortcuts*. To use it just push the keystrokes after any valid word:

```
if<CTRL + J> to obtain:
if (| < )

ifc<CTRL + J> to obtain:
if (| < ) {

}

fo<CTRL + J> to obtain:
for (i in 1:i|)

foc<CTRL + J> to obtain:
for (i in 1:|) {

}

sw<CTRL + J> to obtain:
switch(|,
a = ' ',
b = ' ',
)

wh<CTRL + J> to obtain:
i = 0
while (i < |) {

  i = i + 1
}

eq<CTRL + J> to obtain:
\begin{equation}\label{eq_01}
  |
\end{equation}
```

Observations:

1. Only two letters were used to define the functions (for example: *fo* = *for*, *fu* = *function*);

2. Therefore, we added the letter c for more complex structures (for example: *foc, fuc*);
3. The | symbol is used to define where the cursor will first stop after auto-completion. After being selected the | symbol marks the point where the user can start typing.

The *Edit* button opens the dialog showed in the Figure 3.37.
Read below for a brief description of available buttons:

Restore default: Restores the file `Completion.xml` from the origin at (`InstallPath/data/data.zip`). Any prior change to the file `Completion.xml` being used will be lost.

New: Places the table in insertion mode.

Delete: Deletes the current registry from the table.

Edit: Places the table in edition mode.

Cancel current: Cancels any change made to the current edition.

Cancel all: Cancels all changes made to the database prior to *Save*.

Save: Overwrites the text file (XML), saving all changes made to the current table.

Close: Closes the dialog. All non-saved changes will be lost.

Comments

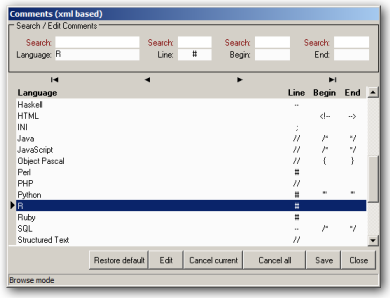


FIGURE 3.38: Comments (Database).

The available buttons (Figure 3.35) are:

Help: It opens the *User Guide* on the section about the selected topic.

Edit: It opens the dialog *Comments (xml based)* below.

The *Edit* button opens the dialog shown in the Figure 3.38.
Read below a brief description of available buttons:

Restore default: Restores the file `Comments.xml` from the origin at (`InstallPath/data/data.zip`). Any prior changes in the file `Comments.xml` currently being used will be lost.

Edit: Places the table in edition mode.

Cancel current: Cancels any change made to the current edition.

Cancel all: Cancels all changes made to the database prior to *Save*.

Save: Overwrites the text file (XML) saving all changes made to the current table.

Close: Closes the dialog. All non-saved changes will be lost.

R card

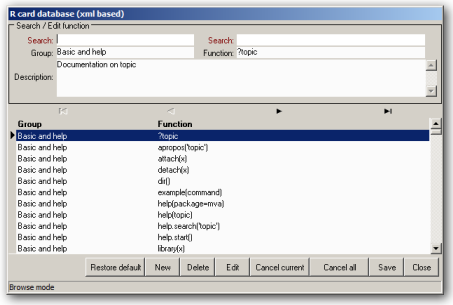


FIGURE 3.39: R card (Database).

The available buttons (Figure 3.35) are:

Help: Sends the following instruction to R: `help('selected function')`.

Example: Sends the following instruction to R: `example('selected function')`.

Copy function: Places the selected function in the clipboard.

Copy descrition: Places the descrition of the selected function on the clipboard.

Edit: Opens the dialog *R card database (xml based)* below.

Insert: Inserts the selected function in the active editor. A `Double click` or `Enter` performs the same function.

The *Edit* button opens the dialog shown in the Figure 3.39.
Read below a brief description of available buttons:

Restore default: Restores the file `Rcard.xml` from the origin at (`InstallPath/data/data.zip`). Any prior changes in the file `Rcard.xml` currently being used will be lost.

New: Places the table in insertion mode.

Delete: Delete the current registry from the table.

Edit: Places the table in edition mode.

Cancel current: Cancels any change made to the current edition.

Cancel all: Cancels all changes made to the database prior to *Save*.

Save: Overwrites the text file (XML) saving all changes made to the current table.

Close: Closes the dialog. All non-saved changes will be lost.

R mirrors

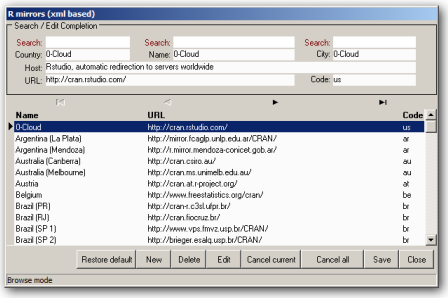


FIGURE 3.40: R mirrors (Database).

The available buttons (Figure 3.35) are:

Help: Sends the following instruction to R: `help('selected function')`.

Example: Sends the following instruction to R: `example('selected function')`.

Copy function: Places the selected function in the clipboard.

Copy description: Places the description of the selected function in the clipboard.

Edit: Opens the dialog *R tip database (xml based)* below.

Insert: Inserts the selected funtion in the active editor. A `Double click` or `Enter` performs the same function.

The *Edit* button opens the dialog shown in the Figure 3.40.
Read below a brief description of available buttons:

Restore default: Restores the file `Rtip.xml` from the origin at (`InstallPath/data/data.zip`). Any prior change to the file `Rtip.xml` while being used will be lost.

New: Places the table in insertion mode.

Delete: Deletes the current registry from the table.

Edit: Places the table in edition mode.

Cancel current: Cancels any change made during the current editing session.

Cancel all: Cancels all changes made to the database prior to *Save*.

Save: Overwrites the text file (XML) while saving all changes made to the current table.

Close: Closes the dialog. All changes not previously saved will be lost.

3.14 REGULAR EXPRESSIONS

This session is an adaptation. It is based on the help of the freewere PSPad editor.

What are regular expressions?

Regular expressions are widely-used method to specify text patterns to be searched for. Special metacharacters allow you to specify, for instance, that a particular string you are looking for occurs at the beginning or end of a line, or contains n recurrences of a certain character.

Regular expressions may look ugly to novices, but are actually a very simple, handy and powerful tool.

Simple Matches

Any single character matches itself, unless it is a metacharacter with a special meaning described below.

A series of characters matches that series of characters in the target string, so the pattern `bluh` would match `bluh` in the target string.

You can cause characters that normally function as metacharacters or escape sequences to be interpreted literally by `escaping` them. Do this by preceding them with a backslash \. For instance: metacharacter ^ match beginning of string, but \^ match character ^, \\ match \ and so on.

Examples:

ER	Matches
`foobar`	`foobar`
`\^FooBarPtr`	`^FooBarPtr`

Escape Sequences

Characters may be specified using a escape sequences syntax much like that used in C and Perl: `\n` matches a newline, `\t` a tab, etc. More generally, `\xnn`, where `nn` is a string of hexadecimal digits, matches the character whose ASCII value is `nn`. If you need wide (Unicode) character code, you can use `\x{nnnn}`, where `nnnn` is one or more hexadecimal (base 16) digits (1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F). Hex digit letters may be in upper or lower case.

ER	Description
\xnn	Char with hex code nn
\x{nnnn}	Char with hex code nnnn (one byte for plain text and two bytes for Unicode)
\t	Tab (HT/TAB), same as \x09
\n	Newline (NL), same as \x0a
\r	Carriage return (CR), same as \x0d
\f	Form feed (FF), same as \x0c
\a	Alarm (bell) (BEL), same as \x07
\e	Escape (ESC), same as \x1b

Examples:

ER	Matches
foo\x20bar	foo bar (note space in the middle)
\tfoobar	foobar predefined by tab

Character Classes

You can specify a character class by enclosing a list of characters in [], which will match any one character from the list. If the first character after the [is ^, the class matches any character not in the list.

Examples:

ER	Matches
foob[aeiou]r	foobar, foober, etc. But not foobbr, foobcr, etc
foob[^aeiou]r	foobbr, foobcr, etc. But not foobar, foober, etc

Within a list, the - character is used to specify a range, so that a-z represents all characters between a and z, inclusive.
If you want - itself to be a member of a class, put it at the start or end of the list, or escape it with a backslash. If you want] you may place it at the start of list or escape it with a backslash.

Examples:

ER	Matches
[-az]	a, z and -
[az-]	a, z and -
[a\-z]	a, z and -
[a-z]	All twenty six small characters from a to z
[\n-\x0D]	Any of ASCII #10(Lf), #11, #12(Ff), #13(Cr)
[\d-t]	Any digit, - or t
[]-a]	Any char from]..a

Metacharacters

Metacharacters are special characters which are the essence of regular expressions. There are different types of metacharacters, described below.

Metacharacters - Line Separators:

ER	Description
^	Start of line
$	End of line
\A	Start of text
\Z	End of text
.	Any character in line

Examples:

ER	Matches
^foobar	foobar only if it's at the beginning of line
foobar$	foobar only if it's at the end of line
^foobar$	foobar only if it's the only string in line
foob.r	foobar, foobbr, foob1r and so on

The ^ metacharacter by default is only guaranteed to match at the beginning of the input string/text, the $ metacharacter only at the end. Embedded line separators will not be matched by ^ or $. You may, however, wish to treat a string as a multi-line buffer, such that the ^ will match after any line separator within the string, and $ will match before any line separator. You can do this by switching the modifier /m on.

The \A and \Z are just like ^ and $, except that they won't match multiple times when the modifier /m is used, while ^ and $ will match at every internal line separator.

Metacharacters - Predefined Classes:

ER	Description
\w	An alphanumeric character (including _)
\W	A non alphanumeric character
\d	A numeric character
\D	A non-numeric character
\s	Any space (same as [\t\n\r\f])
\S	A non space

You may use \w, \d and \s within custom character classes.

Examples:

ER	Matches
foob\dr	foob1r, foob6r and so on but not foobar, foobbr and so on
foob[\w\s]r	foobar, foob r, foobbr and so on but not foob1r, foob=r and so on

TRegExpr uses properties SpaceChars and WordChars to define character classes \w, \W, \s, \S, so you can easily redefine it.

Metacharacters - Word Boundaries:

ER	Matches
\b	A word boundary
\B	A non-(word boundary)

A word boundary \b is a spot between two characters that has a \w on one side of it and a \W on the other side of it (in either order), counting the imaginary characters of the beginning and end of the string as matching a \W.

Metacharacters - Iterators:
Any item of a regular expression may be followed by another type of metacharacters - iterators. Using this metacharacters you can specify number of occurrences of the previous character, metacharacter or subexpression.

ER	Matches
*	Zero or more ("greedy"), similar to {0,}
+	One or more ("greedy"), similar to {1,}
?	Zero or one ("greedy"), similar to {0,1}
{n}	Exactly n times ("greedy")
{n,}	At least n times ("greedy")
{n,m}	At least n but not more than m times ("greedy")
*?	At least n but not more than m times ("greedy")
+?	At least n but not more than m times ("greedy")
??	Zero or one ("non-greedy"), similar to {0,1}?
{n}?	Exactly n times ("non-greedy")
{n,}?	At least n times ("non-greedy")
{n,m}?	At least n but not more than m times ("non-greedy")

So, digits in curly brackets of the form {n,m}, specify the minimum number of times to match the item n and the maximum m. The form {n} is equivalent to {n,n} and matches exactly n times. The form {n,} matches n or more times. There is no limit to the size of n or m, but large numbers will chew up more memory and slow down r.e. execution.
If a curly bracket occurs in any other context, it is treated as a regular character.

Examples:

ER	Matches
foob.*r	foobar, foobalkjdflkj9r and foobr
foob.+r	foobar, foobalkjdflkj9r but not foobr
foob.?r	foobar, foobbr and foobr but not foobalkj9r
fooba{2}r	foobaar
fooba{2,}r	foobaar, foobaaar, foobaaaar, ...
fooba{2,3}r	foobaar, or foobaaar but not foobaaaar

A little explanation about greediness. Greedy takes as many as possible, non-greedy takes as few as possible. For example, b+ and b* applied to string abbbbc return bbbb, b+? returns b, b*? returns empty string, b{2,3}? returns bb, b{2,3} returns bbb.

Metacharacters - Alternatives:

You can specify a series of alternatives for a pattern using | to separate them, so that fee|fie|foe will match any of fee, fie, or foe in the target string (as would f(e|i|o)e). The first alternative includes everything from the last pattern delimiter ((, [, or the beginning of the pattern) up to the first |, and the last alternative contains everything from the last | to the next pattern delimiter. For this reason, it's common practice to include alternatives in parentheses, to minimize confusion about where they start and end.

Alternatives are tried from left to right, so the first alternative found for which the entire expression matches, is the one that is chosen. This means that alternatives are not necessarily greedy. For example: when matching foo|foot against barefoot, only the foo part will match, as that is the first alternative tried, and it successfully matches the target string. (This might not seem important, but it is important when you are capturing matched text using parentheses).

Also remember that | is interpreted as a literal within square brackets, so if you write [fee|fie|foe]. You're really only matching [feio|].

Examples:

ER	Matches
foo(bar|foo)	foobar or foofoo

Metacharacters - Subexpressions:

The bracketing construct (...) may also be used to define r.e. subexpressions (after parsing, you can find subexpression positions, lengths and actual values in MatchPos, MatchLen and Match properties of TRegExpr, and substitute it in clip strings by TRegExpr.Substitute).

Subexpressions are numbered based on the left to right order of their

opening parenthesis. First subexpression has number `1` (whole r.e. match has number `0` - you can substitute it in TRegExpr. Substitute as `$0` or `$&`).

Examples:

ER	Matches
`(foobar){8,10}`	Strings which contain 8, 9 or 10 instances of the `foobar`
`foob([0-9]|a+)r`	`foob0r`, `foob1r` , `foobar`, `foobaar`, `foobaar`, ...
`(abc(def)ghi(123))xzy`	`abcdefghi123xyz` (the only match)

Then backreferences:

ER	Description
`\1`	`= abcdefghi123`
`\2`	`=def`
`\3`	`=123`
`\0`	`=abcdefghi123xyz (the whole match)`

We could find the same string using metacharacter Iterators with: `(\w{3}([d-f]{3})...(\d*))xyz` and the backreferences would have the same values. And yet the pattern would also match: `123fdd@#$4444xyz`, `bbbeee-abc1234567xyz`, `ddddddaaaxyz`.

Metacharacters - Backreferences:
Metacharacters `\1` through `\9` are interpreted as backreferences in the *Search text* box. When used outside of the regular expression, such as in the *Replace text* field, metacharacters `$1` through `$9` are interpreted as backreferences to the last find.
`\<n>` matches previously matched subexpression `#<n>`.

Find Examples:

ER	Matches
`(.)\1+`	`aaaa` and `cc`
`(.+)\1+`	`abab` and `123123`
`(['"]?)(\d+)\1`	`"13"`(in double quotes), or `'4'` (in single quotes) or `77` (without quotes), ...

Replace Examples: Date format change from `dd.mm.yyyy` to `yyyy-mm-dd`. This will turn the European date style `26.8.1994` or `26/8/1994` into `1994-8-26`. Search: `([0-9]{1,2}).([0-9]{1,2}).([0-9]{4})` Replace: `$3-$2-$1` Make sure you check the box for *Regular Expression*.

Regular Expression Tutorials

The following is a list of a few sites that contain tutorials on both regular expressions in general and their use in specific languages:

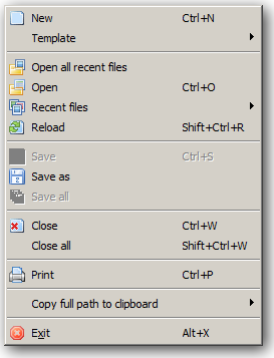
- General Tutorial
- Regular Expressions - User guide
- Regular Expression HOWTO
- Perl Regular Expressions
- Regular Expression Basic Syntax Reference

CHAPTER 4

MENU DESCRIPTION

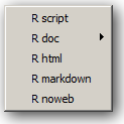
This section provides information about the main menu for Tinn-R.

4.1 FILE



Option	Description
New	Creates a new file
Template	*See options ...*
Open all recent files	Opens all files from the Most Recently Used (MRU) file list
Open	Opens selected file as text
Recent files	Displays a Most Recently Used (MRU) file list. Selecting one of the displayed files will open that file
Reload	Reloads the current files to the last saved status
Save	Saves the current file. If the file has not been previously saved then the 'File Save As' dialog will open first
Save as	Saves the current file with a new name
Save all	Saves all changed files. If a file has not been previously saved the 'File Save As' dialog will open first
Close	Closes the current file. If the file has not been saved you will be prompted to save it
Close all	Closes all files including projects
Print	Will open a Tinn-R dialog allowing settings and actions associated with the current file
Copy full path to clipboard	*See options ...*
Exit	Exits the application

Template:

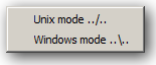


Option	Description
R script	Creates a R script template
R doc	*See options ...*
R html	Creates a R html template
R markdown	Creates a R markdown template
R noweb	Creates a R noweb template

R doc:

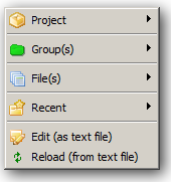
Option	Description
Function	Creates a R doc function template
Dataset	Creates a R doc dataset template
Empty	Creates a R doc empty template

Copy full path to clipboard:



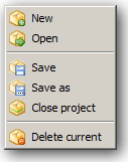
Option	Description
Unix mode ../..	Copy full path of current file to clipboard in Unix mode ../..
Windows mode ..\..	Copy full path of current file to clipboard Windows mode ..\..

4.2 PROJECT



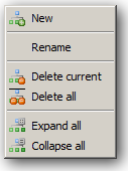
Option	Description
Project	*See options ...*
Group(s)	*See options ...*
File(s)	*See options ...*
Recent	The option will display a Most Recently Used (MRU) project file list. Selecting one of the displayed files will open that file
Edit (as text file)	Opens the textual description of the project for editing
Reload (from text file)	Reloads the graphical project interface from the textual description of the project

Project:



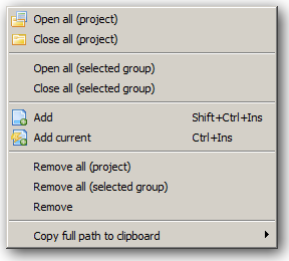
Option	Description
New	Creates new project. If you have an open unsaved project you will be prompted to save the project file
Open	Opens existing project and restores the project's state
Save	Saves the project file
Save as	Saves the current file with a new name
Close project	This option will close any files that are in a virtual folder
Delete current	This option will delete the virtual folder of the current project

Group(s):



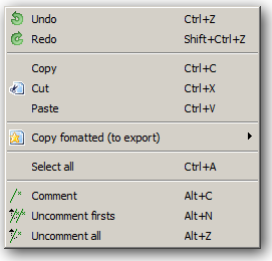
Option	Description
New	Creates a new group of current project
Rename	Renames a selected group of current project
Delete current	Removes the selected group from the current project
Delete all	Removes all groups from the current project
Expand all	Expands all groups of the current project in the graphical interface
Collapse all	Collapses all groups of the current project in the graphical interface

File(s):



Option	Description
Open all (project)	Opens all files of a project
Close all (project)	Closes all files of a project
Open all (selected group)	Opens all files of a selected group
Close all (selected group)	Closes all files of a selected group
Add	Opens the windows interface to select file(s) and add the selected(s) files to a selected group
Add current	Add the current file to the selected group
Remove all (project)	Removes all files from the project
Remove all (selected group)	Removes all files from the selected group
Remove	Removes selected file
Copy full path to clipboard	Copies the full path of selected files to the clipboard

4.3 EDIT

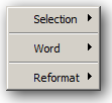


Option	Description
Undo	Undoes the last action
Redo	Re-applies any actions undone using the Undo option
Copy	Copies the selected text and places it in the Windows clipboard
Cut	Cuts the selected text and places it in the Windows clipboard
Paste	Places any text in the Windows clipboard at position indicated by the cursor within the file
Copy formatted (to export)	*See options ...*
Select all	Selects the whole text contained in the file
Comment	Adds comments to selected line(s)
Uncomment firsts occurrence	Removes the first occurrence from a comment in the selected line(s)
Uncomment all occurrence	Removes all occurrences from a comment in the selected line(s)

Copy formatted (to export):

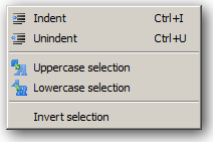
Option	Description
Rtf	Copies the selected text and places it in the Windows clipboard in Rtf format
Html	Copies the selected text and places it in the Windows clipboard in Html format
TeX	Copies the selected text and places it in the Windows clipboard in TeX format

4.4 FORMAT



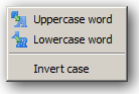
Option	Description
Selection	*See options ...*
Word	*See options ...*
Reformat	*See options ...*

Selection:



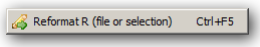
Option	Description
Indent	Indents selected line(s)
Unindent	Unindents selected line(s)
Uppercase selection	Converts selected text into upper case
Lowercase selection	Converts selected text into lower case
Invert selection	Inverts the case of all selected text

Word:



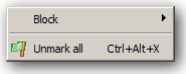
Option	Description
Uppercase word	Converts the word under the cursor to upper case
Lowercase word	Converts the word under the cursor to lower case
Invert case	Inverts the case of the word under the cursor

Reformat:



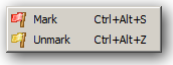
Option	Description
Reformat R (file or selection)	Reformat a whole file or selection by using formatR package

4.5 MARKS



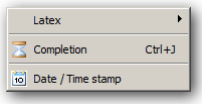
Option	Description
Block	*See options ...*
Unmark all	Unmarks all marks of the current file

Block:



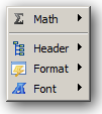
Option	Description
Mark	Marks selected block: `0 to begin` and `1 to end`
Unmark	Unmarks any previous marked block. It is not necessary to select the marked block

4.6 INSERT



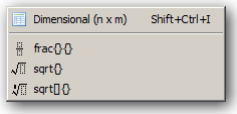
Option	Description
LaTeX	*See options ...*
Completion	Insert the completion
Date / Time stamp	Inserts the current system time and date

Latex:



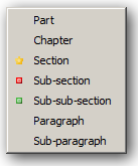
Option	Description
Math	*See options ...*
Header	*See options ...*
Format	*See options ...*
Font	*See options ...*

Math:



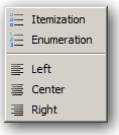
Option	Description
Dimensional	Opens a dialog box to insert a dimensional element: Array, Matrix, Tabular or Tabbing
frac{}{}	Inserts **frac{}{}**. If there are two selected elements, for example `1 2`, it will place both elements in the correct position, i.e, **frac{1}{2}**
sqrt{}	Inserts **sqrt{}**. If an element is selected, say `9`, it will place this element in the correct position, i.e, **sqrt{9}**
sqrt[]{}	Inserts **sqrt[]{}**. If there are two selected elements, for example `3 27`, it will place both in the correct position, i.e, **sqrt[3]{27}**

Header:



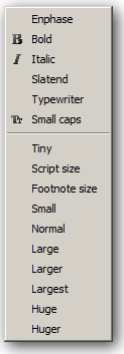
Option	Description
Part	Inserts **part{}** if no selection or **part{selected}**
Chapter	Inserts **chapter{}** if no selection or **chapter{selected}**
Section	Inserts **section{}** if no selection or **section{selected}**
Sub-section	Inserts **subsection{}** if no selection or **subsection{selected}**
Sub-sub-section	Inserts **subsubsection{}** if no selection or **subsubsection{selected}**
Paragraph	Inserts **paragraph{}** if no selection or **paragraph{selected}**
Sub-paragraph	Inserts **subparagraph{}** if no selection or **subparagraph{selected}**

Format:



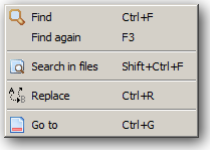
Option	Description
Itemization	Inserts itemization or itemizes a selection
Enumeration	Inserts enumeration or enumerates a selection
Left	Inserts tag to align the text on the left or to align the selection on the left
Center	Inserts tag to align the text on the center or to centralize the selection
Right	Inserts tag to align the text right or to align the selection on the right

Font:



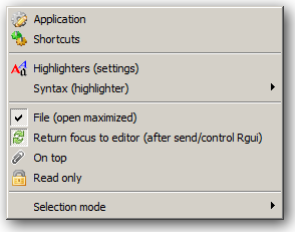
Option	Description
Enphase	Inserts **\emph{}** if no selection or **\emph{selected}**
Bold	Inserts **\textbf{}** if no selection or **\textbf{selected}**
Italic	Inserts **\textit{}** if no selection or **\textit{selected}**
Slatend	Inserts **\textsl{}** if no selection or **\textsl{selected}**
Typewriter	Inserts **\texttt{}** if no selection or **\texttt{selected}**
Small caps	Inserts **\textsc{}** if no selection or **\textsc{selected}**
Tiny	Inserts **{\tiny {}}** if no selection or **{\tiny {selected}}**
Script size	Inserts **{\scriptsize {}}** if no selection or **{\scriptsize {selected}}**
Footnote size	Inserts **{\footnotesize {}}** if no selection or **{\footnotesize {selected}}**
Small	Inserts **{\small {}}** if no selection or {\small **{selected}}**
Normal	Inserts **{\normalsize {}}** if no selection or **{\normalsize {selected}}**
Large	Inserts **{\large {}}** if no selection or **{\large {selected}}**
Larger	Inserts **{\Large {}}** if no selection or **{\Large {selected}}**
Largest	Inserts **{\LARGE {}}** if no selection or **{\LARGE {selected}}**
Huge	Inserts **{\huge {}}** if no selection or **{\huge {selected}}**
Huger	Inserts **{\Huge {}}** if no selection or **{\Huge {selected}}**

4.7 SEARCH



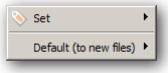
Option	Description
Find	Opens the Find dialog
Find again	Uses the previously entered search criteria to find the next occurrence, i.e, one closer to the end of the file. This option is not available if a search has not been carried out.
Search in files	Opens the Search in files dialog
Replace	Opens the Replace dialog
Go to	This option produces the dialog below and allows you to move the cursor to the specified position

4.8 OPTIONS



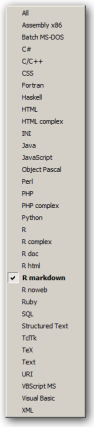
Option	Description
Application	Opens the Application options dialog
Shortcuts	Opens the Shortcuts customization dialog
Highlighters (settings)	Opens the Highlighters (settings) dialog
Syntax (highlighters)	*See options ...*
File (open maximized)	When this option is set all files will be opened maximized
Return focus to editor (after send/control Rgui)	When this option is set the focus will go back to the active editor after any Send or Control action
On top	Toggles Tinn-R's ability to be the topmost window on the desktop
Read only	Toggles file read-only status. When set as read-only the file name on the file tab is among <...>
Selection mode	*See options ...*

Syntax (highlighter):



Option	Description
Set	*See options ...*
Default (to new files)	*See options ...*

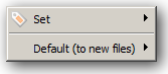
Set:



Option	Description
All	File without extension or not recognized extension
Assembly x86	x86 Assembly files
Bath MS_DOS	MS_DOS Bath files
C#	C# files
C/C++	C/C++ files
CSS	Cascading SS files
Fortran	Fortran files
Haskell	Haskell files
HTML	Hypertext Markup Language (HTML) files
HTML complex	Hypertext Markup Language (HTML) complex (HTML & JavaScript) files
INI	INI files
Java	Java files
JavaScript	JavaScript files
Object Pascal	Pascal files
Perl	Perl files
PHP	PHP files
PHP complex	PHP (HTML & JavaScript & PHP) complex files
Python	Python files
R	R files
R complex	R complex (R & URI) files
R doc	Rd files
R html	Rhtml files
R markdown	Rmd files
R noweb	R noweb (TeX & R) files
Ruby	Ruby files
SQL	SQL files
Structured Text	Structured Text files
TclTk	TclTk files
TeX	TeX files
Text	Text files
URI	Uniform Resource Identifiers (URI) files
MS VBScript	MS VBScript files
Visual Basic	Visual Basic files
XML	XML files

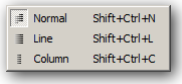
If necessary Select manually one of the list. Tinn-R recognizes automatically the syntax based on the file extensions.

Default (to new files):



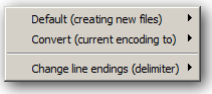
Option	Description
R	When this option is set the highlighter of all new files will be set as *R*
R complex	When this option is set the highlighter of all new files will be set as *R complex*
Text	When this option is set the highlighter of all new files will be set as *Text*

Selection mode:



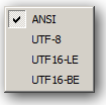
Option	Description
Normal	See selection type normal ...
Line	See selection type line ...
Column	See selection type column ...

4.9 ENCODING



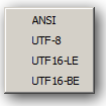
Option	Description
Default (creating new files)	*See options ...*
Convert (current encoding to)	*See options ...*
Change line ending (delimiter)	*See options ...*

Default (creating new files):



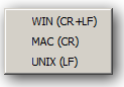
Option	Description
ANSI	Sets encoding to ANSI
UTF-8	Sets encoding to UTF-8
UTF16-LE	Sets encoding to UTF16-LE
UTF16-BE	Sets encoding to UTF16-BE

Convert (current encoding to):



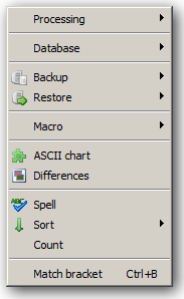
Option	Description
ANSI	Converts current encoding to ANSI
UTF-8	Converts current encoding to UTF-8
UTF16-LE	Converts current encoding to UTF16-LE
UTF16-BE	Converts current encoding to UTF16-BE

Change line ending (delimiter):



Option	Description
WIN (CR+LF)	Changes line endings (delimiter) to WIN (CR+LF)
MAC (CR)	Changes line endings (delimiter) to MAC (CR)
UNIX (LF)	Changes line endings (delimiter) to UNIX (LF)

4.10 TOOLS

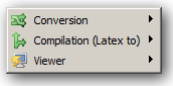


Option	Description
Processing	*See options ...*
Database	*See options ...*
Backup	*See options ...*
Restore	*See options ...*
Macro	*See options ...*
ASCII chart	Allows you to insert an active char to the active document
Differences	Opens the nice TextDiff command by Angus Johnson integrated within Tinn-R
Spell	Starts the speller (see instructions ...)
Sort	*See options ...*
Count	Shows the result of the count action (words, characters + spaces, character - spaces and spaces) for files or a text selection
Match bracket	Search for matching bracket. See details below

How to match: The cursor must be placed immediately before any of the bracket characters. When this option is called the cursor will move to the point immediately before the matching bracket.

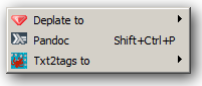
Recognized brackets: The bracket characters are (), [] and {}.

Processing:



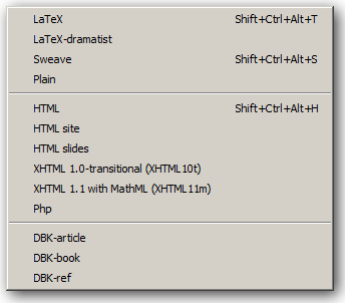
Option	Description
Conversion	*See options ...*
Compilation (LaTeX to)	*See options ...*
Viewer	*See options ...*

Conversion:



Option	Description
Deplate to	*See options ...*
Pandoc	*See options ...*
Txt2tags to	*See options ...*

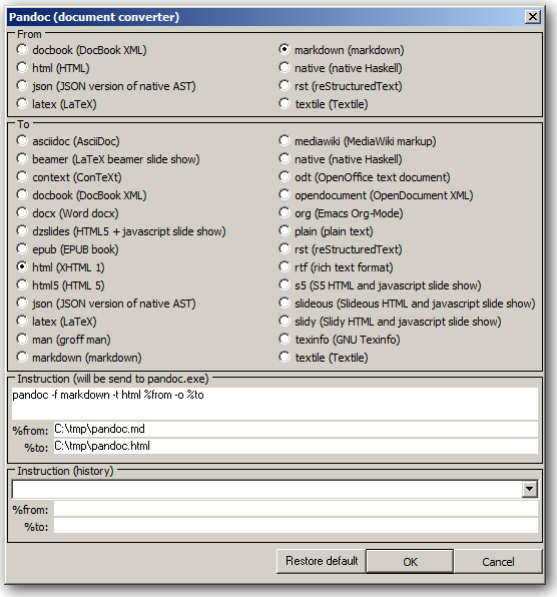
Deplate to:



Option	Description
LaTeX	Converts a Deplate file to LaTeX
LaYeX-dramatist	Converts a Deplate file to LaTeX-dramatist
Sweave	Converts a Deplate file to Sweave
Plain	Converts a Deplate file to Plain
HTML	Converts a Deplate file to HTML
HTML site	Converts a Deplate file to HTML site
HTML slides	Converts a Deplate file to HTML slides
XHTML 1.0 transitional (xhtml10t)	Converts a Deplate file to XHTML 1.0 transitional
XHTML 1.1 with MathML (xhtml11m)	Converts a Deplate file to XHTML 1.1 with MathML
PHP	Converts a Deplate file to PHP
Dbk-article	Converts a Deplate file to Dbk-article
Dbk-book	Converts a Deplate file to Dbk-book
Dbk-ref	Converts a Deplate file to Dbk-ref

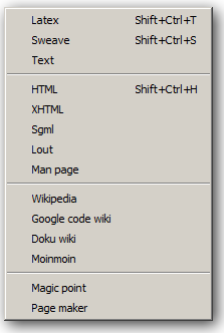
Tip: see details ...

Pandoc



Tip: see details ...

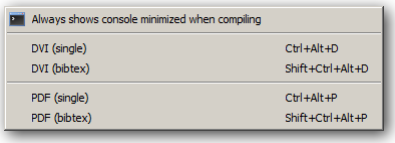
Txt2tags to:



Option	Description
LaTeX	Converts a Txt2tags file into LaTeX
Sweave	Converts a Txt2tags file into Sweave
Txt	Converts a Txt2tags file into txt
HTML	Converts a Txt2tags file into HTML
XHTML	Converts a Txt2tags file into XHTML
SGML	Converts a Txt2tags file into SGML
Lout	Converts a Txt2tags file into Lout
Man page	Converts a Txt2tags file into Man page
Wikipedia	Converts a Txt2tags file into Wikipedia
Google code wiki	Converts a Txt2tags file into Google code wiki
Doku wiki	Converts a Txt2tags file into Doku wiki
Moinmoin	Converts a Txt2tags file into Moinmoin
Magic point	Converts a Txt2tags file into Magic point
Page maker	Converts a Txt2tags file into Page maker

Tip: see details ...

Compilation (latex to):

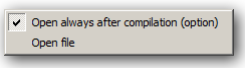


Option	Description
Always shows console minimized when compiling	When this option is set the DOS console will be minimized when compiling
DVI (single)	Compiles a LaTeX file to DVI in single way
DVI (bibtex)	Compiles a LaTeX file to DVI in bibtex way (three compilation)
Pdf (single)	Compiles a LaTeX file to PDF in single way
Pdf (bibtex)	Compiles a LaTeX file to PDF in bibtex way (three compilation)

Viewer:

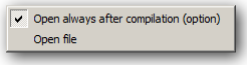
Option	Description
DVI	*See options ...*
PDF	*See options ...*
HTML	*See options ...*

DVI:



Option	Description
Open always after compilation (option)	When this option is set the DVI file will be opened by the viewer after the compilation
Open file	Shows the *Windows Open dialog* to select a DVI file to be opened by the viewer

Pdf:

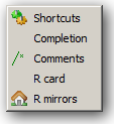


Option	Description
Open always after compilation (option)	When this option is set the Pdf file will be opened by the viewer after the compilation
Open file	Shows the *Windows Open dialog* to select a DVI file to be opened by the viewer

Html:

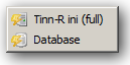
Option	Description
Open always after conversion (option)	When this option is set the Html file will be opened by the viewer after the compilation
Open current file	Opens the current DVI file with the viewer
Open file	Shows the *Windows Open dialog* to select a DVI file to be opened by the viewer

Database:



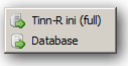
Option	Description
Shortcuts	Shows Shortcuts database (XML based) dialog
Completion	Shows Completion database (XML based) dialog
Comments	Shows Comments database (XML based) dialog
R card	Shows R card database (XML based) dialog
R mirrors	Shows R mirrors database (XML based) dialog

Backup:



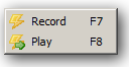
Option	Description
System configuration	Backups Tinn-R configuration (ini files)
Database	Backups database (Cachexml, Comments.xml, Completions.xml, Rcard.xml, Rmirrors.xml and Shortcuts.xml)

Restore:



Option	Description
System configuration	Restores a prior Tinn-R backup (ini files)
Database	Restores a prior database backup (Cachexml, Comments.xml, Completions.xml, Rcard.xml, Rmirrors.xml and Shortcuts.xml)

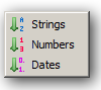
Macro:



Option	Description
Record	Toggles macro recording on and off. Note that when recording a macro the button changes
Play	Plays a previous recorded macro

It is not possible to save/edit macros, they are temporary

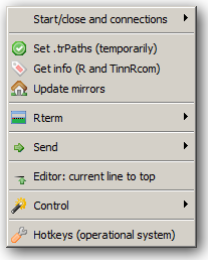
Sort:



Option	Description
Strings	Sorts strings
Numbers	Sorts numbers
Dates	Sorts dates

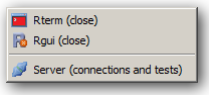
Sort works on the entire document unless some text is selected

4.11 R



Option	Description
Start/close and connections	*See options ...*
Set .trPaths (temporarily)	Sets (temporarily) the necessary .trPaths object in R environment This object provided by TinnRcom package. This option is useful only if the user can not, for some reason, install the TinnRcom package
Get info (R and TinnRcom)	Get information about R and the necessary TinnRcom package
Update mirrors	Updates the Rmirrors.xml file
Rterm	*See options ...*
Send	*See options ...*
Editor: current line to top	Brings the current line to the top of the editor interface
Control	*See options ...*
Hotkeys (operational system)	Shows Tinn-R hotkeys (related with the operational system) dialog. See Hotkeys (operational system) ...

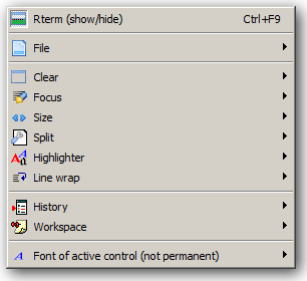
Start/close and connections:



Option	Description
Rterm (start/close)	Starts and Closes Rterm interface
Rgui (start/close)	Starts and Closes Rgui application
Server (connections and tests)	Opens the dialog *R server: connections and tests*

Tip: the *Server (connections and tests)* dialog allows you to test the TCP/IP communication protocols used to establish a communication between R and Tinn-R.

Rterm:



Option	Description
Interface (show/hide)	Toggles (show/hide) Rterm interface
File	*See options ...*
Clear	*See options ...*
Focus	*See options ...*
Size	*See options ...*
Split	*See options ...*
Syntax	*See options ...*
Word wrap	*See options ...*
History	*See options ...*
Workspace	*See options ...*
Font of active control (not permanent)	*See options ...*

File:

Option	Description
IO	*See options ...*
Log	*See options ...*

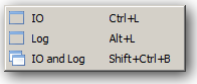
File IO:

Option	Description
Save	Saves the content of the IO interface
Save as	Saves the content of the IO interface as a new file
Print	Opens the Tinn-R print dialog with the content from the IO interface

File Log:

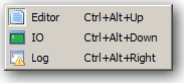
Option	Description
Save	Saves the content of the Log interface
Save as	Saves as the content of the Log interface
Print	Opens the Tinn-R print dialog with content from Log interface

Clear:



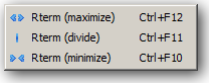
Option	Description
IO	Clear IO
Log	Clear Log
IO and Log	Clear IO and Log

Focus:



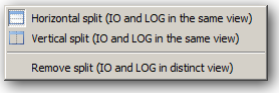
Option	Description
Editor	Places the focus inside of the *editor*
IO	Places the focus inside of the *IO*
Log	Places the focus inside of the *Log*

Size:



Option	Description
Rterm (maximize)	Maximizes the Rterm interface
Rterm (divide)	Divides the Rterm interface
Rterm (minimize)	Minimizes the Rterm interface

Split:



Option	Description
Horizontal split (IO and Log in the same view)	Splits horizontally the Rterm interface placing *IO* and *Log* on the same view
Vertical split (IO and Log in the same view)	Splits vertically the Rterm interface placing *IO* and *Log* on the same view
Remove split (IO and Log in distinct view)	Removes split placing *IO* and *Log* in distinct view

Syntax:

Option	Description
IO	*See options ...*
Log	*See options ...*

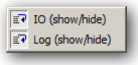
Syntax IO:

Option	Description
Text	Sets the IO highlighter to Text
R	Sets the IO highlighter to R

Syntax Log:

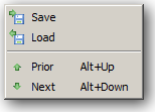
Option	Description
Text	Sets the Log highlighter to Text
R	Sets the Log highlighter to R

Word wrap:



Option	Description
IO	Sets Word wrap to IO
Log	Sets Word wrap to Log

History:

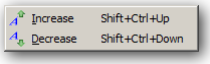


Option	Description
Save	Saves the history
Load	Loads the history
Prior	Prior section of the history
Next	Next section of the history

Workspace:

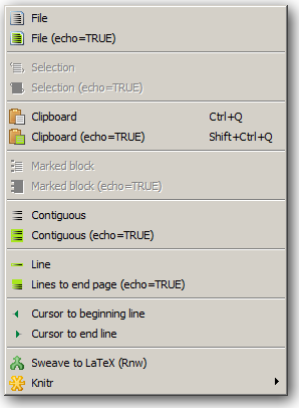
Option	Description
Save	Saves the workspace
Load	Loads the workspace

Font of active control (not permanent):



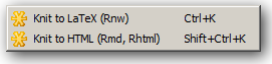
Option	Description
Increase	Increase the font size
Decrease	Decrease the font size

Send:



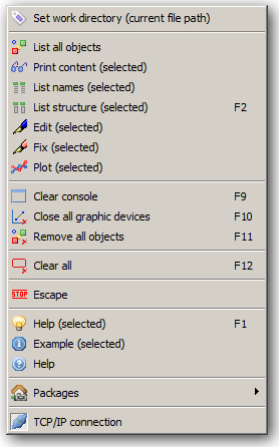
Option	Description
File	Sends current file to R interpreter
File (`echo=TRUE`)	Sends current file to R interpreter echoing the content
Selection	Sends current selection to R interpreter
Selection (`echo=TRUE`)	Sends current selection to R interpreter echoing the content
Clipboard	Sends the clipboard content to R interpreter
Clipboard (`echo=TRUE`)	Sends the clipboard content to R interpreter echoing the content
Marked block	Sends current marked block to R interpreter
Marked block (`echo=TRUE`)	Sends current marked block to R interpreter echoing the content
Line	Sends current line to R interpreter echoing it
Lines to end page (`echo=TRUE`)	Sends all visible lines to end page echoing it
Cursor to beginning line	Sends cursor position to beginning line
Cursor to end line	Sends cursor position to end line
Sweave	Sends to R interpreter `Sweave('Active file')` instruction
Knitr	*See options ...*

Knitr:



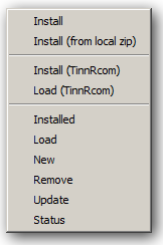
Option	Description
Knit to LaTeX (Rnw)	Knit the *.Rnw file to LaTeX
Knit to HTML (Rmd, Rhtml)	Knit the *.Rmd or *.Rhtml file to HTML

Control:



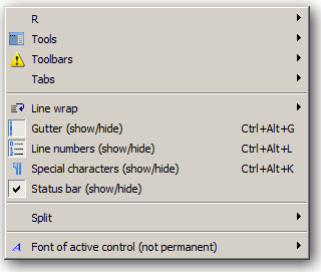
Option	Description
Set work directory (current file path)	Sets the work directory of the R interpreter to the current file path
List all objects	Sends to R interpreter a `ls()` instruction
Print content (selected)	Sends to R interpreter a `selected` word
List names (selected)	Sends to R interpreter a `names(selected)` instruction
List structure (selected)	Sends to R interpreter a `str(selected)` instruction
Edit (selected)	Sends to R interpreter a `edit(selected)` instruction
Fix (selected)	Sends to R interpreter a `fix(selected)` instruction
Plot (selected)	Sends to R interpreter a `plot(selected)` instruction
Clear console	Sends and executes the virtual `CTRL + L` (clear screen) instruction
Close all graphic devices	Sends to R interpreter a `graphics.off()` instruction
Remove all objects	Sends to R interpreter a `rm(list=ls())` instruction
Clear all	Sends to R interpreter a `graphics.off()`; `rm(list=ls())` `CTRL + L` instructions
Escape	Stops all computations in Rgui
Help (selected)	Sends to R interpreter a `help(selected)` instruction
Example (selected)	Sends to R interpreter a `example(selected)` instruction
Help	Sends to R interpreter a `help.start(update=FALSE)` instruction
Packages	*See options ...*
TCP/IP connection	Sends to R interpreter an instruction to start: `startSocketServer(port=portnumber)` or stop: `startSocketServer(port=portnumber)` the TCP/IP connection

Packages:



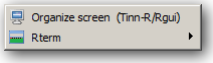
Option	Description
Install	Sends to R interpreter an `utils:::menuInstallPkgs()` instruction
Install (from local zip)	Sends to R interpreter a `utils:::menuInstallLocal()` instruction
Install (TinnRcom)	Sends to R interpreter instruction to install TinnRcom package and its dependecies. By default it is not necessary since the TinnRcom package is automatically installed
Load (TinnRcom)	Sends to R interpreter an `library(TinnRcom)` instruction. By default it is not necessary since the TinnRcom package is automatically loaded when R starts
Installed	Sends to R interpreter a `installed.packages()` instruction
Load	Sends to R interpreter a `local({pkg <- select.list(sort(.packages(all.available = TRUE))); if(nchar(pkg)) library(pkg, character.only=TRUE)})` instruction
New	Sends to R interpreter a `new.packages()` instruction
Remove	Sends to R interpreter a `local({pkg <- select.list(sort(.packages(all.available = TRUE))); if(nchar(pkg)) remove.packages(pkg)})` instruction
Update	Sends to R interpreter an `update.packages(ask='graphics')` instruction
Status	Sends to R interpreter a `packageStatus()` instruction

4.12 VIEW



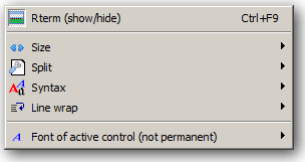
Option	Description
R	*See options ...*
Tools	*See options ...*
Toolsbar	*See options ...*
Tabs	*See options ...*
Word wrap (show/hide)	*See options ...*
Line numbers (show/hide)	Toggles (show/hide) line numbers
Special characters (show/hide)	Toggles (show/hide) special characters
Shortcuts (show)	Shows shortcuts interface (not implemented yet)
Status bar (show/hide)	Toggles (show/hide) status bar
Split	*See options ...*
Font of active control (not permanent)	*See options ...*

R:



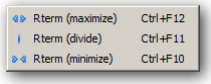
Option	Description
R resources (show/hide)	Toggles (show/hide) all R resources
Organize screen (Tinn-R/Rgui)	Organizes the screen (Tinn-R and Rgui) according to the user set. *See options ...*
Rterm	*See options ...*

Rterm:



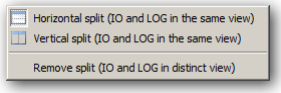
Option	Description
Interface (show/hide)	Toggles (show/hide) Rterm interface
Size	*See options ...*
Split	*See options ...*
Syntax	*See options ...*
Word wrap	*See options ...*
Font of active control (not permanent)	*See options ...*

Size:



Option	Description
Rterm (maximize)	Maximizes the Rterm interface
Rterm (divide)	Splits the Rterm interface
Rterm (minimize)	Minimizes the Rterm interface

Split:



Option	Description
Horizontal split (IO and Log in the same view)	Horizontally splits the Rterm interface placing *IO* and *Log* in the same view
Vertical split (IO and Log in the same view)	Vertically splits the Rterm interface placing *IO* and *Log* in the same view
Remove split (IO and Log in distinct view)	Removes split placing *IO* and *Log* in distinct view

Syntax:

Option	Description
IO	*See options ...*
Log	*See options ...*

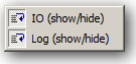
Syntax IO:

Option	Description
Text	Sets the IO highlighter to Text
R	Sets the IO highlighter to R

Syntax Log:

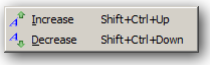
Option	Description
Text	Sets the Log highlighter to Text
R	Sets the Log highlighter to R

Word wrap:



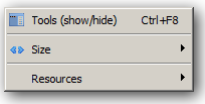
Option	Description
IO	Sets Word wrap to IO
Log	Sets Word wrap to Log

Font of active control (not permanent):



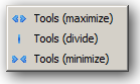
Option	Description
Increase	Increase font size
Decrease	Decrease font size

Tools:



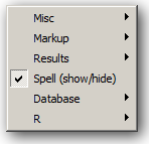
Option	Description
Tools (show/hide)	Toggles (show/hide) *Tools* interface
Size	*See options ...*
Resources	*See options ...*

Size:



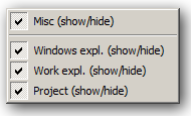
Option	Description
Tools (maximize)	Maximizes the *Tools* interface
Tools (divide)	Divides the *Tools* interface
Tools (minimize)	Minimizes the *Tools* interface

Resources:



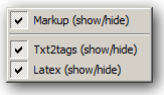
Option	Description
Misc	*See options ...*
Markup	*See options ...*
Results	*See options ...*
Shortcuts (show/hide)	Toggles (show/hide) *Shortcuts* tab of *Tools* interface
Spell (show/hide)	Toggles (show/hide) *Spell* tab of *Tools* interface
Database	*See options ...*
R	*See options ...*

Misc:



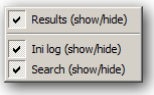
Option	Description
Misc (show/hide)	Toggles (show/hide) *Misc* tab of *Tools* interface
Windows expl. (show/hide)	Toggles (show/hide) *Windows expl.* tab of *Misc*
Work expl. (show/hide)	Toggles (show/hide) *Work expl.* tab of *Misc*
Project (show/hide)	Toggles (show/hide) *Project* tab of *Misc*

Markup:



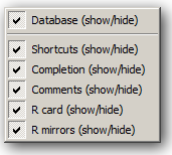
Option	Description
Markup (show/hide)	Toggles (show/hide) *Markup* tab of *Tools* interface
Txt2tags (show/hide)	Toggles (show/hide) *Txt2tags* tab of *Markup*
LaTeX (show/hide)	Toggles (show/hide) *LaTeX* tab of *Markup*

Results:



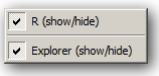
Option	Description
Results (show/hide)	Toggles (show/hide) *Results* tab of *Tools* interface
Ini log (show/hide)	Toggles (show/hide) *Ini log* tab of *Results*
Search (show/hide)	Toggles (show/hide) *Search* tab of *Results*

Database:



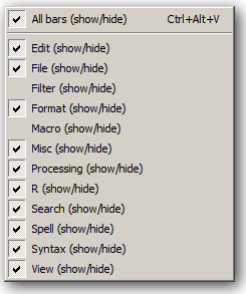
Option	Description
Database (show/hide)	Toggles (show/hide) *Database* tab of *Tools* interface
Shortcuts (show/hide)	Toggles (show/hide) *Shortcuts* tab of *Database*
Completion (show/hide)	Toggles (show/hide) *Completion* tab of *Database*
Comments (show/hide)	Toggles (show/hide) *Comments* tab of *Database*
R card (show/hide)	Toggles (show/hide) *Rcard* tab of *Database*
R mirrors (show/hide)	Toggles (show/hide) *R mirrors* tab of *Database*

R:



Option	Description
R (show/hide)	Toggles (show/hide) *R* tab of *Tools* interface
Explorer (show/hide)	Toggles (show/hide) *Explorer* tab of *R*

Toolbars:

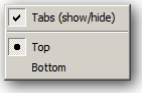


Option	Description
All bars (show/hide)	Toggles (show/hide) *All bars* tab of *Tools bar* interface
Edit (show/hide)	Toggles (show/hide) *Edit* tab of *Tools bar* interface
File (show/hide)	Toggles (show/hide) *File* tab of *Tools bar* interface
Filter (show/hide)	Toggles (show/hide) *Filter* tab of *Tools bar* interface
Format (show/hide)	Toggles (show/hide) *Format* tab of *Tools bar* interface
Macro (show/hide)	Toggles (show/hide) *Macro* tab of *Tools bar* interface
Misc (show/hide)	Toggles (show/hide) *Misc* tab of *Tools bar* interface
Processing (show/hide)	Toggles (show/hide) *Processing* tab of *Tools bar* interface
R (show/hide)	Toggles (show/hide) *R* tab of *Tools bar* interface
Search (show/hide)	Toggles (show/hide) *Search* tab of *Tools bar* interface
Spell (show/hide)	Toggles (show/hide) *Spell* tab of *Tools bar* interface
Syntax (show/hide)	Toggles (show/hide) *Syntax* tab of *Tools bar* interface
View (show/hide)	Toggles (show/hide) *View* tab of *Tools bar* interface

Tabs:

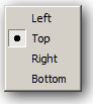
Option	Description
Files	*See options ...*
Tools	*See options ...*
Rterm	*See options ...*

Files:



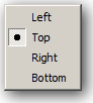
Option	Description
Tabs (show/hide)	Toogles(show/hide) the main *Tabs*
Top	Shows the main *Tabs* on top
Bottom	Shows the main *Tabs* on bottom

Tools:



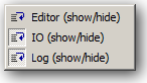
Option	Description
Left	Shows the *Tools Tabs* on left
Top	Shows the *Tools Tabs* on top
Right	Shows the *Tools Tabs* on right
Bottom	Shows the *Tools Tabs* on bottom

Rterm:



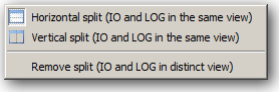
Option	Description
Left	Shows the *Rterm Tabs* on left
Top	Shows the *Rterm Tabs* on top
Right	Shows the *Rterm Tabs* on right
Bottom	Shows the *Rterm Tabs* on bottom

Word wrap:



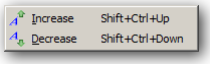
Option	Description
Editor (show/hide)	Toggles (show/hide) *Editor* word wrap
Rterm/IO (show/hide)	Toggles (show/hide) *Rterm/IO* word wrap
Rterm/Log (show/hide)	Toggles (show/hide) *Rterm/Log* word wrap

Split:



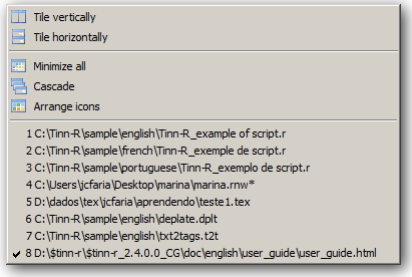
Option	Description
Horizontal	Horizontally splits the editor
Vertical	Vertically splits the editor
Remove	Removes split

Font of active control (not permanent):



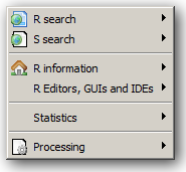
Option	Description
Increase	Increase font size
Decrease	Decrease font size

4.13 WINDOW



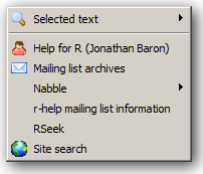
Option	Description
Tile vertically	Shows two views of the same file tiled vertically, to the left and right. Each can be scrolled independently
Tile horizontally	Shows two views of the same file tiled horizontally, one above the other. Each can be scrolled independently
Minimize all	Minimizes all windows (editor)
Cascade	The windows cascade from the upper left to the lower right of the workspace
Arrange icons	Windows are tiled horizontally, but the active document comes on top. You may also drag your document tabs to the order you prefer and then tile them horizontally
Files opened	If many files are opened, a dialog will be open to select a file

4.14 WEB



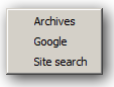
Option	Description
R search	*See options ...*
S search	*See options ...*
R information	*See options ...*
R Editors, GUIs and IDEs	*See options ...*
Statistics	*See options ...*
Processing	*See options ...*

R search:



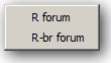
Option	Description
Selected text	*See options ...*
Help for R (Jonathan Baron)	Opens URL Help for R
Mailing list archives	Opens URL R mailing lists archive
Nabble	*See options ...*
r-help mailing list information	Opens URL r-help
RSeek	Opens URL R Seek
Site search	Opens URL R Site Search

Selected text:



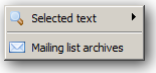
Option	Description
Archives	Opens URL R mailing lists archive and lists the results associated with the word under the cursor or selected text
Google	Opens URL Google and lists the results associated with the word under the cursor or selected text
Site search	Opens URL R Site Search and lists the results associated with the word under the cursor or selected text

Nabble:



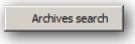
Option	Description
R forum	Opens URL R forum
R-br forum	Opens URL R-br forum

S search:



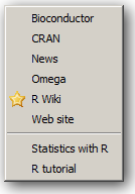
Option	Description
Selected text	*See options ...*
Mailing list archives	Opens URL S-News Mailing List Archives

Selected text:



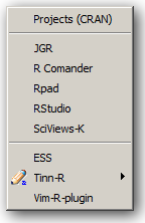
Option	Description
Archives search	Opens URL S-news archive search and lists the results associated with the word under the cursor or selected text

R information:



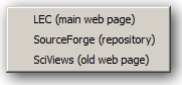
Option	Description
CRAN	Opens URL The Comprehensive R Archive Network
Web site	Opens URL The R Project for Statistical Computing
News	Opens URL R News
R Wiki	Opens URL R Wiki
Bioconductor	Opens URL Bioconductor project

R Gui's:



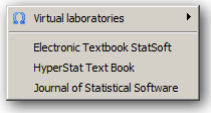
Option	Description
Projects (CRAN)	Opens URL R GUI Projects
JGR	Opens URL JGR - Java GUI for R
R Comander	Opens URL The R Commander: A Basic-Statistics GUI for R
Rpad	Opens URL Rpad home page
RStudio	Opens URL RStudio
SciViews-K	Opens URL SciViews-K
ESS	Opens URL Emacs Speaks Statistics (ESS)
Tinn-R	*See options ...*
Vim-R-plugin	Opens URL Vim-R-plugin : Plugin to work with R

Tinn-R:



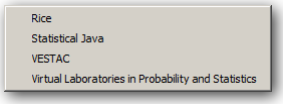
Option	Description
LEC (main web page)	Opens URL LEC
SourceForge (repository)	Opens URL Sourceforge.net Tinn-R
SciViews (old web page)	Opens URL SciViews Tinn-R

Statistics:



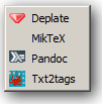
Option	Description
Virtual laboratories	*See options ...*
Electronic Textbook StatSoft	Opens URL Electronic Textbook StatSoft
HyperStat Text Book	Opens URL HyperStat Text Book
Journal of Statistical Software	Opens URL Journal of Statistical Software

Virtual laboratories:



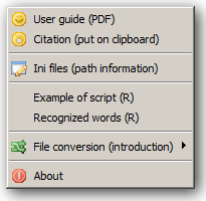
Option	Description
Rice	Opens URL Rice Virtual Lab in Statistics
Statistical Java	Opens URL Statistical Java
VESTAC	Opens URL Java Applets for Visualization of Statistical Concepts
Virtual Laboratories in Probability and Statistics	Opens URL Virtual Laboratories in Probability and Statistics

Processing:



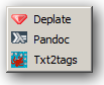
Option	Description
Deplate	Opens URL Sourceforge.net Deplate
MikTeX	Opens URL MiKTeX project page
Pandoc	Opens URL Pandoc (a universal document converter)
Txt2tags	Opens URL Txt2tags ONE source, MULTI targets

4.15 HELP



Option	Description
User guide (PDF)	Opens the User guide with the PDF viewer default
Citation (put on clipboard)	Places a text containing the Tinn-R citation in the clipboard
Ini files (path information)	Displays a single dialog with the path information of ini files for Tinn-R
Recognized words (R)	Opens the file *Tinn-R_recognized words.r*
Example of script (R)	Opens the file *Tinn-r_example of script.r*
File conversion (introduction)	*See options ...*
About	Opens the dialog About

File conversion (introduction):



Option	Description
Deplate	Opens the file *deplate_intro.t2t*
Pandoc	Opens the file *pandoc.markdown*
Txt2tags	Opens the file *txt2tags_intro.t2t*

CHAPTER 5

SOME SECRETS FOR AN EFFICIENT USE

The idea behind this chapter is that it has contributions from multiple users. If you find something that is not important but that you would like to include here, please submit it to the project coordinator.

5.1 INTRODUCTION

Let us assume that you are a basic user of R and you do not understand the intricacies of computer languages and that you want to write and run an R-script. The software providing an interface between R and the user is called a *user interface*. If this interface also has graphical capabilities, it is called a graphical user interface or *GUI*.
R running under Windows and Mac have a graphical interface (Rgui) that allows you to submit your commands and see the respective results, but that interface is a bit limited.
Many attempts have been made to provide R with a user friendly graphical interface running on Windows. One of the most successful ones is Tinn-R, which is arguably the most used "GUI" among R users on Windows.
A large number of Tinn-R users do not know how to improve its performance and their productivity, so this chapter is an attempt to help you to make the most out of its features.
Let us start, then. After downloading Tinn-R from its main *Web page* or *Sourceforge*, you should install and open the software.

AFTER INSTALLATION

At the top of the screen there is a Main menu (1) and two toolbars: the top toolbar is the *main toolbar (2)* and the bottom task bar is the *R toolbar (3)*.

If your version is the same or above 3.0.1.0, Tinn-R does not require any special configuration. That is, the program is ready to be used. One important thing to be done before using it: set a R mirror as close as possible to where you work. For that, first click on CTRL + F8. This opens the Tools window, then click on Database/R mirrors. Select the R mirror and push the button that shows an hourglass in the taskbar database. The chosen repository will be the new default for all actions dependent repository (install packages, upgrade packages, etc).

The second step is connecting Tinn-R with R. Look at the *R toolbar*. Almost at the right end you will see two icons together: one is the R symbol and the second is like a green television screen:

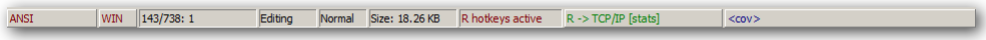
The first connects Tinn-R to R Console (32 or 64 bit), also called Rgui, the second with Rterm. With Tinn-R the Rgui should be used only when you need heavy and intensive processing; otherwise, you should always use Rterm, which is a lot more much friendly, having many editorial features of Tinn-R editor. However it consumes more computer resources. Click on that little screen as soon as the connection with R is made. That screen will become red and Rterm will appear on a window by itself. You can move that window across Tinn-R main window and dock it either at the left, right or bottom side.

The best location will depend on the size of your computer screen. To do so, just put the mouse on the blue strip at the top of Rterm window, click the left button of the mouse and move. To dock it at either side just pull it closer and closer to the chosen side and then, bingo, you will see how it becomes when docked. We like to use Tinn-R with two monitors: the editor docked in one and the Rterm (or Rgui) interface in other. It is a very comfortable and productive arrangement. You should follow the same procedure to dock the Tools window.

Since R computer language is an interpreted one, each command given gets its answer right away, therefore the most used command in Tinn-R is the send line which sends the command line to be interpreted by R. You will see the answer to the command at Rterm or Rgui window. This command appears at the bottom icon bar, the sixth box, the one with just one line.

You just have to click there and the line is sent to R. Even though this is a nice way to do it, there is a faster way to send a line to R. First, click on R at the Main menu and then on Hotkeys (operational system). On the open window click on the line send line to select it. Then go to the top right blank edit box, click there and then press (for example, the F4 button), then click on the bottom bar the button Add and then click on active

radio button.
Now, whenever you press F4 the line you are on is sent to R, it is much faster than clicking with the mouse at the appropriate button and has the advantage that you can send the line to R wherever is the focus of your present work in your computer.
You can also turn on and off the hotkeys by clicking the hotkeys on the status bar at the bottom of the Tinn-R screen. Another important feature on the status bar is the `smNormal (s=selection, m=mode)` box. This allows you to select a portion of a file. Selecting it will change your options to `smLine` or `smColumn`. The latter is helpful since it allows you to select columns within a file without having to carry the whole line with it. Give it a try.



All the first eight boxes with icons at the R task bar are related to many different ways of sending instructions: The whole file, selected parts, the clipboard content, contiguous lines, single line, either from current line to top or bottom of page and parts of a line. Those are helpful when you are dealing with long scripts, and may very well enhance your programming efficiency. Almost all of them have the option to send lines straight to R or via Rterm (echo=TRUE).

5.2 SHORTCUTS THAT CAN MAKE YOU LOSE THE VISIBILITY OF A RESOURCE

```
CRTL + ALT + V: Toggles the visibility for two main bars (Editor and R)
CTRL + F8     : Toggles the visibility for Tools window
CTRL + F9     : Toggles the viability for Rterm window
```

If a shortcut is accidentaly typed, just toggle it and the related resource will be visible again.

5.3 I'M PANICKING: WHAT DO I DO?

First: **don't panic (it's not good for your health)**!

- **Do not uninstall and reinstall Tinn-R or R unnecessarily**. The origin of the problem (although rare) can be mainly the folder where Tinn-R has installed its ini files (it does not use the windows registry). For some reason, it was corrupted or damaged. The first step is to know where Tinn-R stores these files: `Help/Main/Ini files (path information)` will do the job for you. After that, close Tinn-R, rename (or remove) this folder (it will be recreated after Tinn-R

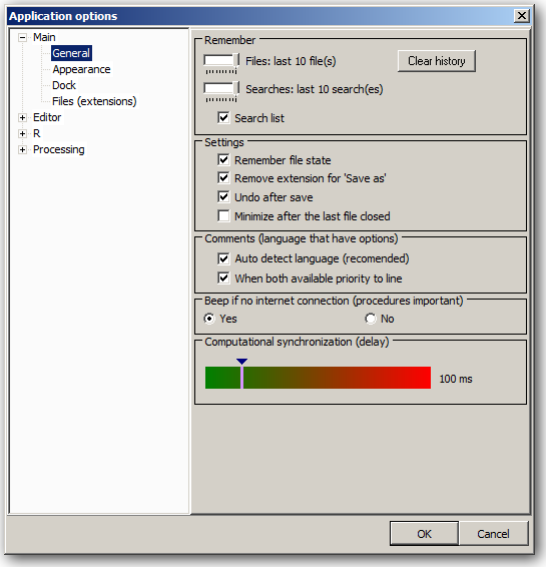
is restarted). If this folder is not visible in your computer *see useful links here*.

- **Feel free to write to the *coordinator of the project*.** If you submit a bug report, please provide as much detail as possible. This includes indicating the Tinn-R version, your operating system (Windows XP, Windows 7, etc) and language (English, French, Portuguese). If the bug is related to an interface with R, indicate which version of R you are using, as well as whether you are running Rterm or Rgui. You should also add the content of the *Tools/Results/Ini log* interface since this will help us to address the issue promptly.

5.4 APPLICATION OPTIONS

General

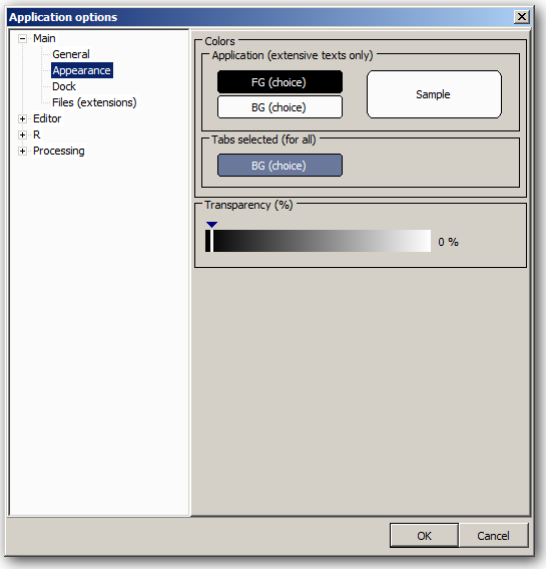
At the main menu click on `Options/Application`. It will opens the window `Options/Application/Main/General`.



One important options here is the *Computational syncronization (delay)*. Several processes are dependent on synchronization between applications (R, converters, compilers). The optimal value of the delay is determined by the following characteristics: user habits, hardware and software available. The ideal value is unique to the various possible combinations of those three characteristics. Try to reduce to the minimum value (50 ms) and test it: if something does not work, increase it gradually and keep testing until getting to the optimal value. The default value (100 ms) may not be optimal for all users.

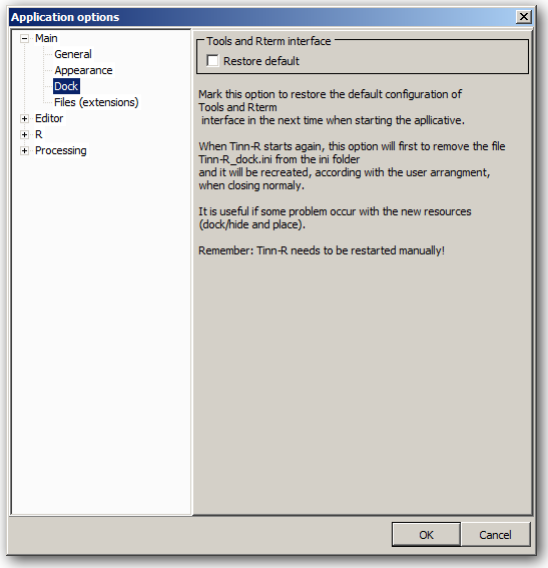
Appearance

At the `Option` window click on the tab `Main/Appearance`. You can choose colors for each character's foreground (FG) and background (BG) color. The color pallet will open and you can then choose the appropriate color. For people working extensive periods of time in front of a computer monitor, dark (or pale) colors with a low level of radiation are recommended for background, obtaining a contrast with characters.



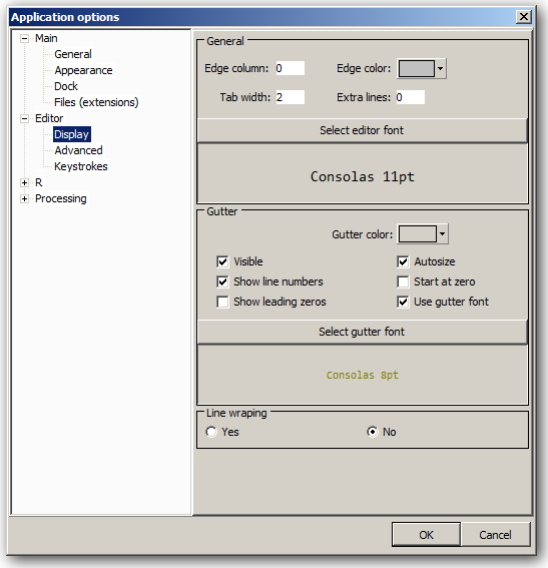
Dock

The dock contains a button called `Restore default`. When clicked, every time you start Tinn-R the Rterm and tools windows will be at the default position. You usually do not want to mark it as you will lose your customization. It is useful if any problem occurs with the resources (dock-/hide and place).



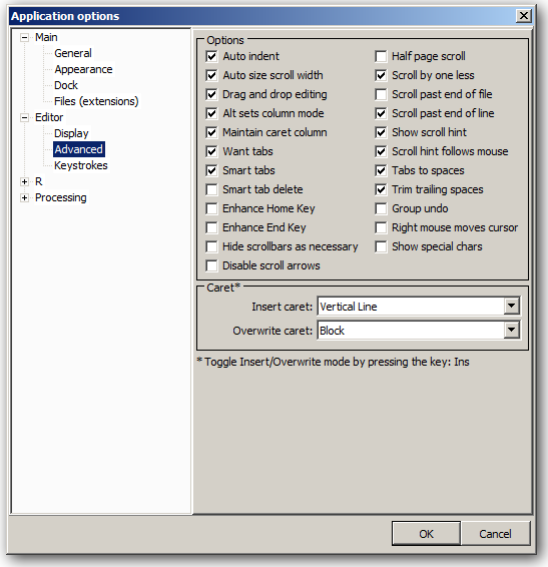
5.5 EDITOR OPTIONS

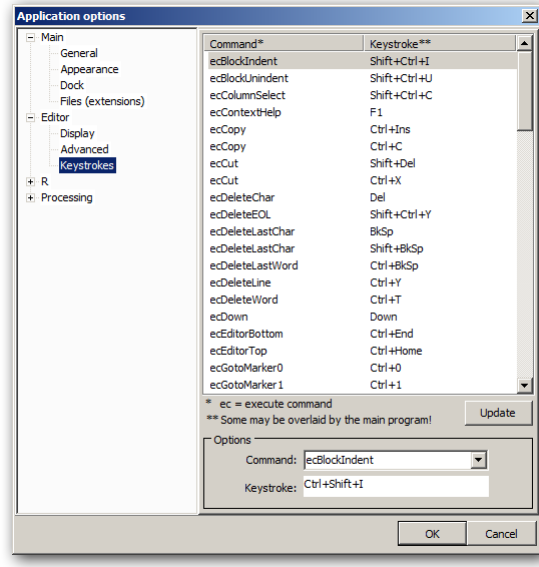
The first window showing up is the `Display`. When first glancing at the editor window (where you type your scripts) you may have noticed a thin vertical line which is located at exactly 80 characters (default) from the beginning of each line. This is called the edge line. This line is very helpful to have a standard width for your texts, mainly when you increase or reduce the font size (`CTRL + SHIFT + UP/DOWN`) as you increase the font the edge line keeps on moving to the right, so that you can adapt the edge column to your preferred font size.



You may choose the font and the font size by clicking on font (`Consolas 11pt` is a nice option). Gutter is the space at extreme left of the editor, out of the text window, where you may number the lines of your script, just click at your choice.

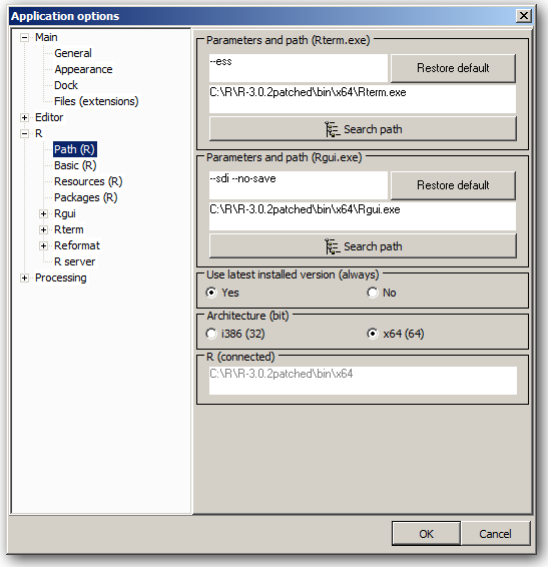
For the other two choices, `Advanced` options and `Keystrokes` *see Editor options*.



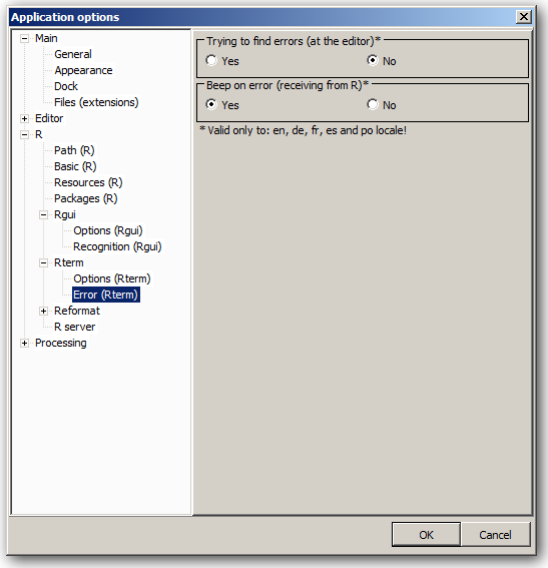


R

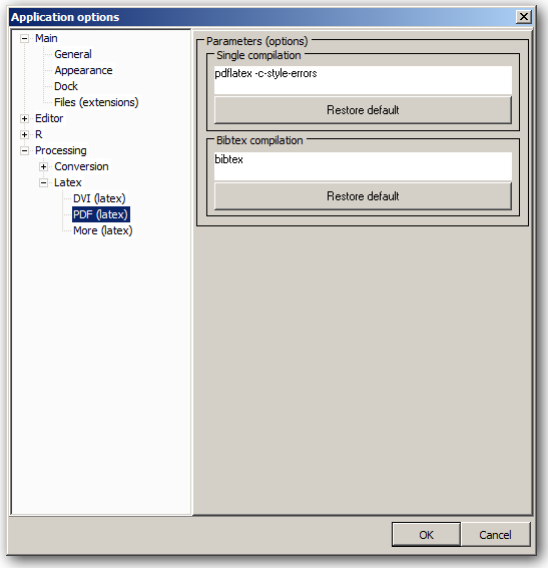
The first tab (`Path`) shows the paths to **Rterm.exe** or **Rgui.exe**. You can also choose whether Tinn-R gets the latest installed version of `R` or the version you would like to use. If you have Windows 7 64 bit choose that option located at the bottom of the window.



The next important tab is `Rterm`. The button `Trying to find errors (at the editor), yes` means that errors in `R` syntax are searched within the editor to find where the error shows up the first time within the script. You will usually have to keep on clicking the `F3` key until you find the error position.

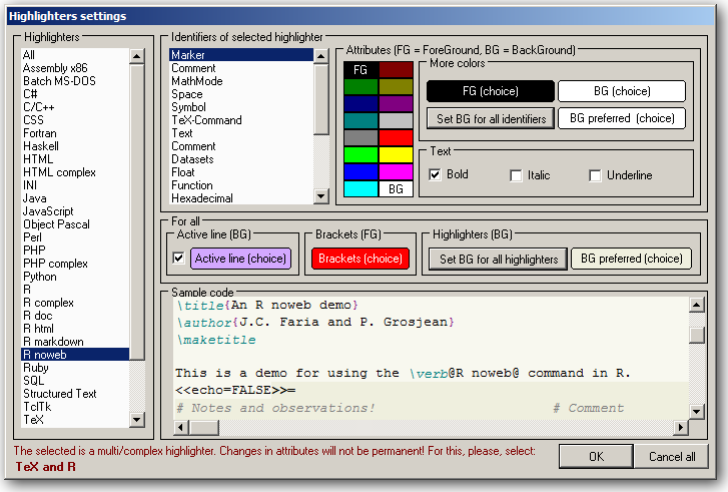


The tab `Processing` allows you to set preferences related to processing, namely text conversion and compilation. For example, click on `Latex/PDF` at `Viewer` (we suggest to use Foxit Reader). That, as it will be shown later, will enable you to compile Latex texts and open them in *.pdf* using Tinn-R. Do not forget to install the Miktex on your computer. If you prefer DVI instead of PDF click on the DVI button.



5.6 HIGHLIGHTERS (SETTINGS)

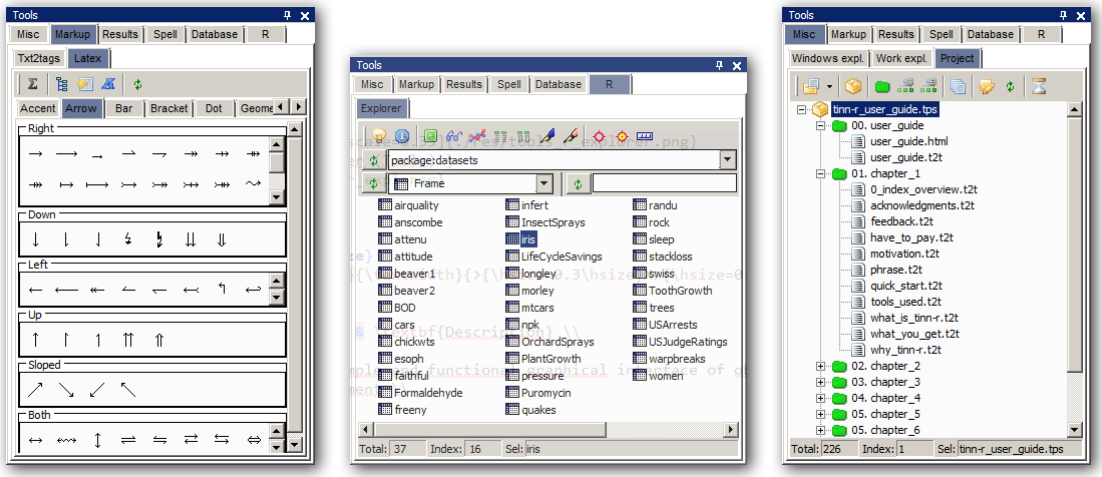
`Highlighters settings` is a window that allows you to customize the text you are working with in relation to appearance. Usually, you will be working with R, R doc, R noweb, Tex or Text files. The type of file is marked automatically at the left column of the window `Highlighters`. Within the `Identifiers` section of the selected highlighter you may choose the foreground (FG) color and the background color (BG) of each highlighter. Since the best configuration of BG is the same for every identifier it is possible to set BG for all at once; use a dark color for BG.



The Syntax option [Options/Syntax(highlighter)] is used to set the highlighter of the type of file you would like, provided it is not the same as the one you are currently working on.

5.7 TOOLS

This interface was designed to allow the expansion of resources. The visibility of the window `Tools` can be changed using `CTRL + F8`. This interface contains many useful features that will make your life easier.



Project

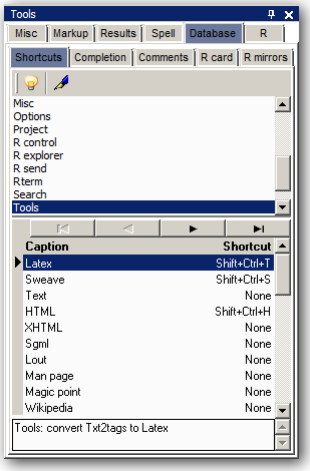
Project allows you to organize different types of files in a hierarchical manner. Even though your project can be found on the main menu bar, it is easier to work with it using the tools window. Press `CTRL + F8` and the tools window will open. Click `Misc/Project`. Beginning from the left, the first icon opens up a window where you can search for project files you want to work on. This file has an extension `.tps`. Otherwise, go to the next icon to open a new project. When you click on that project a window will open, allowing you to choose the folder where the project will be stored. The tree is composed by groups connected at the node level. Groups will contain files with something in common. For example, if you are writing a package, one group might contain all data files, another the demo files, another the `R` files, and so on. The third box contains three icons. The first allows you to create new groups and also rename the deleted groups. The fourth box (sixth icon) allows you to open a project or its parts. The next icon allows you to open a text file with the path corresponding to all files in the project. This functionality is useful when you move the whole project to another computer. The path on the other computer may be different from your computer, and so you have to change the corresponding paths. Save it and start working on the same project on that computer. You may use the search and replace options to perform that change in paths.

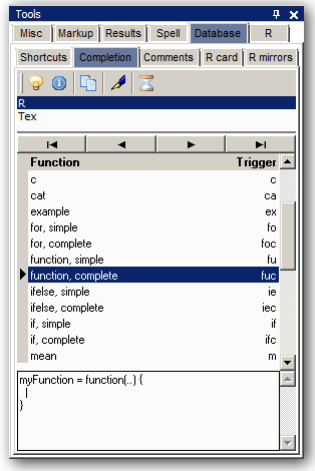
Database

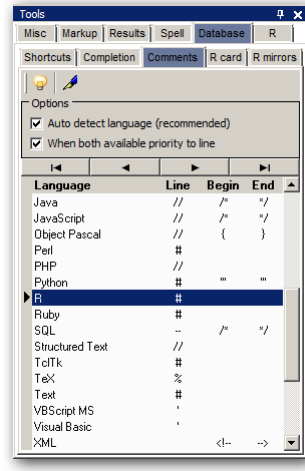
Shortcuts

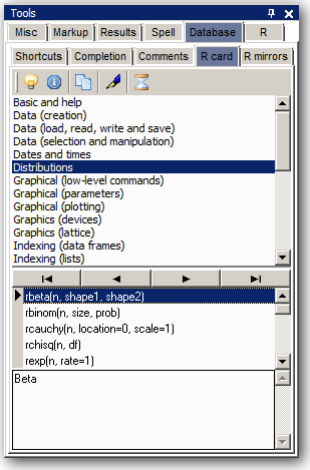
You then go to `Tools/Database` as you click on the box, a small window will open with five tabs. The first is `Shortcuts`. There is a long list of com-

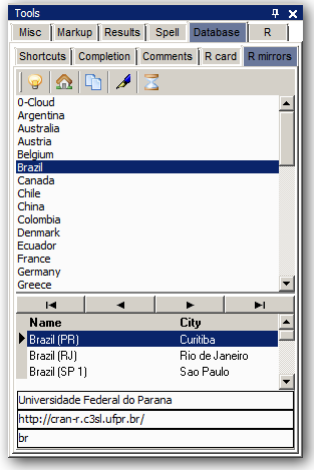
mands, some with a shortcut already configured as a default while other shortcuts can be configured by the user as needed. You may configure the shortcuts that you are used to. However, if they are already in use by the Windows operating system, they won't work. The use of shortcuts can improve the efficiency of your work. You can also have more than one shortcut table.











Completion

Completion will help you speed up the process of writing R scripts. It allows you to personalize its database so that every function, script or text that you frequently use can be automatically inserted in your script through the click of a button.

Let us start by using completion with the functions which are already in the default database. First, click on `Tools/Database/Completion`. A window will open showing all the functions saved in the database at the bottom of the window. Now click on the fourth icon `Completion: edit`. Another window will open, the group to which the function belongs being marked under `Group`, the function being marked under `Function` and the trigger under `Trigger`.

Now open a new file (`CTRL + N`) and write `rn` which is the `trigger for the function rnorm` and then press `CTRL + J` or click on `Insert/Completion` at the main menu.

Now, suppose that you have a section of a script which you use very often when writing scripts. For example, imagine the following script: x <- rnorm(50); y <- rnorm(50) which generates two pseudo-random normal vectors for x- and y-coordinates.

You then select and copy it to the clipboard, click again on the main menu at `Tools/Database/Completion` and at the bottom of window click `New`. Now, at the top in `Group` type the name of the group, in this case let the name be `Examples`, it means that every other example could be saved under this group. In `Function` type the name of this specific function, for example, `norm`, and then type the trigger of this function you are just creating, say, `nm` and in complete paste what you copied. Finally click on `Save` at the bottom of the window. Now go to your text type nm and press `CTRL + J`, that part of the script will appear on your text. Did you get the idea?

Comments

The *Comments* resource is very simple and allows high level of user customization.

From version 3.0.1.0 Tinn-R automatically recognizes the language of the file on focus. Further, inside the file - if it is a syntax a multi-highlighter (complex syntax) - which language of the line where the cursor (or selection) is found.

This identification is done automatically if (and only if) the option *(x) Auto detect language (recomended)* is checked. Otherwise the user is forcing the application to use the comments of the selected language (indicator arrow).

Selected code snippets involving more than one language will not be commented/uncommented and a warning message is issued. That is, you must select only the snippet of a single language.

R card

The Rcard is a database of distributions, mathematical functions, graphical and statistical functions used in R. The main goal of this card is to serve as a means of consultation for the most frequently used commands. A double mouse click will insert your selection in the text you are editing.

R mirrors

The *R mirrors* is an interface that allows the user to manage the repositories (or mirrors) of R. You should always choose a repository physically closest to where you are, so that, the Web communication tends to be faster and more efficient.
The default mirror is the University Wien (Austria). Consider that this is the central mirror of CRAN.
The reasons for the Tinn-R always set a repository (assets) are two:

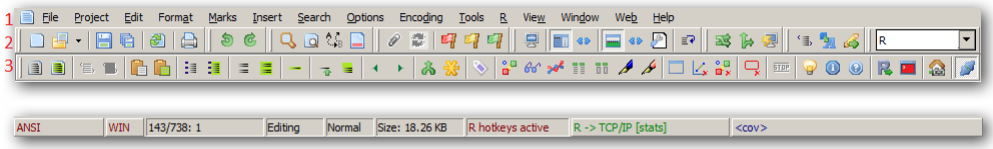
- To prevent R keeps asking which repository you want to use in each session;
- Workaround of intermittency (only related to `Rterm`) not always showing the dialog for selecting the repository. That is, sometimes the dialog is displayed and not others. The cause of this intermittency is still unknown.

One important thing to be done is to set a R mirror as close as possible to where you work. For that, first click on `CTRL + F8`. This opens the `Tools` window, then click on `Database/R mirrors`. Select the R mirror and push the button that shows an hourglass in the taskbar database. The chosen repository will be the new default for all actions dependent repository (install packages, upgrade packages, etc).
R repositories are little changed with the passage of time. Thus, the database `Rmirros.xml` not need to be updated frequently. However, there are options that make the update whenever the user deems necessary:

- Button whose icon is a house on the taskbar Tools/Database/R mirrors;
- Menu R/Update mirrors.

5.8 BARS

Tinn-R has three bars. The top task bar is related to the application and editor, the second task bar is focused on R, and the bottom bar displays the program status.



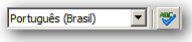
The top task bar (2) can have its location modified by draggin and dropping with your mouse. Right click anywhere on top task bar (2) to see the pop-up menu where you can choose which box of the bar you would like to show or hide. Every box of that bar has a vertical line at its left side. Right click at that location and you can move the bar up and down.

The R task bar (3) can be moved wherever you wish. Right click the vertical line at the left side of the bar and move it across either the editor or `Rterm`. Right click anywhere within the R task bar and choose between `Send to R` and `Control R` to have them displayed or hidden.

The status bar at the bottom of the editor window, shows the current line you are working on, the total number of lines, and the current column at the first box. It also shows the modes which can be either `normal or read only`. You are not allowed to make any changes in the `read only` mode. There is also information about selection mode. It allows you to change the way you select parts of the current working file. See *After installation*.

5.9 SPELL CHECKER

See the steps to be followed in order to install a dictionary. After installing the dictionary, Tinn-R will automatically load it upon starting a new session. To perform a spell check press `CTRL + F8` to open the tools window, and then click on Spell. Go to the editor task bar where it says `ABC`. The arrow to the left allows you to choose the language in which the text is written. Click on `ABC`. All corrections are automatically added to the text. After finishing this process, focus again on the editor and press `CTRL + S` to save all corrections.



5.10 SPLIT

Splitting the editor window is a very useful feature whenever you are working with long and complex programs. Go to the main bar, click on view/split. You may choose to split the window either horizontally or vertically. You will get the same text on two different and independent windows. Any change made in one window will be added automatically to the other and so to the text itself.

5.11 EDITOR: HOW TO?

Here we describe some tips.

Macros: how to use?

Tinn-R provides a useful macro option to help you with repetitive actions.

Click on `Tools/Macro` at the main menu bar. You will then see two icons: Record `F7` and Play `F8`. Those icons may also be found on the editor task bar. Here is an example: write a vector 1:20 and send it to `R`. In the Rterm window you will then see the numbers 1 to 20 in a single line. Copy and paste that to the editor's window.
Suppose that you want to write a comma after every number, maintaining a one space distance after the comma. Place the cursor just before the number one and then press `F7`. A + sign will appear on the Record icon at the editor taskbar, meaning that you are beginning to record action you take on the screen. Press the right arrow to move across the number 1 and type a comma (,), delete one space and move the cursor one space to the right with the right arrow and press again `F7` to stop the recording process. The little + sign will disappear. Now just press `F8` and see what happens. When you reach the number ten it won't work because now the numbers consists of two digits and the spacings will not fit. After doing that for the number nine the cursor will stop in the middle of the number ten, go back one step to the left with the left arrow, and press space bar so that there will be one blank space between the comma and the number ten. Now press again `F7` go across the number ten with the right arrow type the comma (,) and go one space to the right with the right arrow so the cursor is now at the left side of the number eleven, press again `F7`, and then `F8` until the end. Try now to write those numbers in a vertical line across the left margin without the commas using again the macros.

Marks: how to use?

One very useful navegation tool is the `bookmark`. To define the bookmark, use `CTRL + SHIFT + [0-9]` (a key from 0 to 9) on the line you chose. Then, to go to the corresponding bookmark just use `CTRL + [0-9]`. A visual indicator appears in the left margin, just before the line number, of that line. Suppose you are working on a long script and need to constantly return to a specified line. You will see how handy it is. To undo it, just use again `CTRL + SHIFT + [0-9]` using the same number, on the same line. You may also mark a whole block. To to that, first select the block and then click on Marks at the main menu and click on mark. As in the above paragraph the number 0 will appear at the begining of the block and

the number 1 at the end. You can modify the box and send it to R to be processed.

Editor, Tools and Rterm: how to arrange?

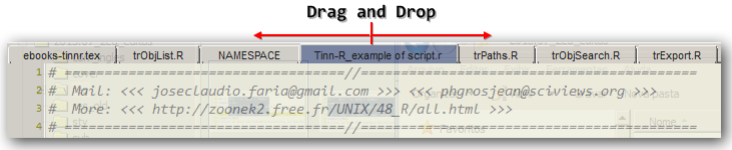
CTRL + F8 toggles the visibility of window Tools and CTRL + F9 toggles the visibility of window Rterm. Now press CTRL + F10, CTRL + F11 or CTRL + F12 and see what happens.
The use of two monitors is recommended in case of intensive use. Placing R (Rgui or Rterm) on a second monitor makes working with data analysis and development tasks very comfortable.

Active page using the keyboard: how to change?

```
CTRL + TAB         : Change sequentially the active page to the right
                     (requires more than one)
CTRL + SHIFT + TAB : Change sequentially the active page to the left
                     (requires more than one)
```

Tab order: how to change?

Drag and drop the tab to the left or right.



APPENDIX A

WHAT IS NEW?

This topic provides information about what is new in Tinn-R.

Year	Versions released	Cumulative sum
2013	08	182
2012	03	174
2010	10	171
2009	16	161
2008	14	145
2007	26	131
2006	64	105
2005	25	041
2004	16	016

A.1 VERSIONS RELEASED IN 2013 (8)

3.0.2.3 (Nov/30/2013)

- Bug(s) fixed:
  - A bug related to double click on `Tools/Database/Comments` has been fixed.
  - A bug related to double click on `Tools/Database/R mirros` has been fixed.
  - A bug related to double click on `Help/Citation (put on clipboard)` has been fixed.
- The procedures related to *R path identification* were a bit improved. Thanks to `Michal Sacharewicz` for the suggestion.

3.0.2.2 (Nov/20/2013)

- Bug(s) fixed:
  - A intermitent bug related to `Sweave and Knitr` has been fixed.
- The *User guide* has been revised.
- The main menu *File* has a new option: *Template*. This submenu has template to: *R script*, *R doc* (*Function*, *Dataset* and *Empty*), *R html*, *R markdown* and *R noweb*.

3.0.2.1 (Nov/19/2013)

- Bug(s) fixed:
  - A bug related to `Edit/Comment` has been fixed.
  - Bugs related to recognition of latest version and update of all five database: `Shortcuts.xml`, `Completion.xml`, `Comments.xml`, `Rcard.xml` and `Rmirrors.xml` have been fixed.
  - Bugs related to `Options/Application` when the user choice `Cancel` have been fixed.
- The suport to `Knitr` package was improved and has more options and resources:
  - A new button: `Knit to LaTeX (.Rnw)`.
  - A new button: `Knit to HTML (.Rmd, Rhtml)`.

  - Two new multi/complex highlighter: `R markdown` and `R html` were added.
  - From now Tinn-R will always open/update the output (`*.tex`, `*.md and/or *.html`) file(s) after interpretation.
  - If the option `Tools/Processing/Viewer/HTML` is marked, the `*.html` output file will be opened on the default browser.
- Parts of the source code related to `Sweave` were enhanced. From now Tinn-R will always open/update the `.tex` file after interpretation.

3.0.1.10 (Nov/15/2013)

- Bug(s) fixed:
  - A bug related to `Rterm/Log/Gutter` was fixed.
- Parts of the source code related to `R path` identification were enhanced.
- Parts of the source code related to `Code completion` were enhanced.

3.0.1.9 (Nov/07/2013)

- The URL of the project was changed to: http://nbcgib.uesc.br/lec/software/editores/tinn-r/en
- The `Rterm` interface now acept the option `eoScrollPastEol` (Allows the cursor to go past the last character into the white space at the end of a line).

3.0.1.8 (Nov/06/2013)

- Bug(s) fixed:
  - A bug related to the `Options/Highlighters (settings)` not remembering when more than one option (Bold, Italic and Underline) is marked was fixed.
  - A bug related to the visibility of the `Toolbar Edit` was fixed.
- The *User guide* has been revised. From this version will be distributed only in PDF format and written entirely in LaTeX.
- This version went through a long period of development and testing. This version brings several improvements to the project and is the best version ever released to the users. We hope you enjoy it!

- The versions 3.0.1.0, 3.0.1.1, 3.0.1.2, 3.0.1.3, 3.0.1.4, 3.0.1.5, 3.0.1.6 and 3.0.1.7 were restricted to RC (Release Candidate) testers: Many thanks to all testers, mainly to `Jakson A. Aquino` (main author of the nice Vim-R-plugin), for his good suggestions!
- The *SynEdit* component used in Tinn-R project was updated to the latest version. Differently from previous versions, all necessary changes and adjustments in the sources of *SynEdit* were made separately from the component, that is in units following the project source code of Tinn-R. This change is intended to facilitate the collective development of the Tinn-R sources.
- The sources of the project were deeply improved.
- Support to *UNICODE* was added (this was a very hard work).
- The highlighters: *R, TeX, All* and *Text* were recreated to *UNICODE* and all have new resources.
- The `Sweave` highlighter was renamed to `R noweb`. It is a multi highlighter: R + TeX.
- From this version Tinn-R Editor/GUI `needs a new version of the TinnR package:` **`TinnRcom`** distributed with the Tinn-R install/setup program.
- The *RegEx PCRE* was implemented in the project. We have now more flexibility to deal with strings in the sources of the project.
- The window `About` was a bit enhanced.
- The support to `DDE protocol` was removed from the project, it is a bit old and hard to maintain.
- The database for *call tip* was removed, due to constant updates of covered packages, it is hard to maintain.
- Two new database were added: `Rmirrors.xml` and `Comments.xml`. The first allows the user to manage the R mirrors and the second, the comments for all supported languages by Tinn-R.
- The `Comment`, `Uncomment first` and `Uncomment all` procedures were improved and from now are in the main menu `Edit`. Now it detects automatically the language and chunks (regions) for multiple (or complex) languages (like: `R noweb`, `R doc`, `HTML complex`, etc). The comments default are all now in the database `Comments.xml` (user configured). The user can force the use of an specific comment by unchecking the option `Tools/Database/Comments: (x) Auto detect language (recommended)`.

- The unique communication protocol with R is now the TCP/IP under the necessary `svSocket package`. There is a new option controlling whether R is connected and whether R is running automatically or not. By default it is set to True.
- The `R explorer` is almost fully based on temporary files, but the request is made silently (if the package svSoket is loaded and the communication (TCP/IP) is active). The reception of the information from R under TCP/IP was removed for this purpose. For massive exchanging information temporary files are faster, more accurate and stable.
- Parts of the source code, related to call tip and data completion were enhanced: it is now faster and more accurated (mainly related to the OOP).
- `Options/Application` window and related options were deeply upgraded. It is important to note that the editor options are now inside this interface.
- The menu `Options/Editor` was removed.
- The menu `View` has a new option: `Gutter (show/hide)` with the shortcuts `CTRL + ALT + G` associated to it. It will affect all instances of `SynEdit` class: Editor, Rterm and Log.
- The menu `Edit` and `Format` were a bit improved.
- An option menu `Encoding` was added to the main menu.
- The menu `Help` was a bit simplified.
- The main menu R was a bit improved and has three new options: `Set .trPaths (temporarily)`,`Get info (R and TinnRcom)` and `Update mirrors`.
- The button `R controls: packages` has new options: `Install` an `Load TinnRcom package`.
- The status bar was new panels showing the encoding and line endings of the files.
- The `Organize screen` procedure (related to screen arrangement of Tinn-R and Rgui.exe) from now runs twice: since just once is not enough for all flavors of the OS Windows.
- Inside `Tools/R explorer`(Tools window) now `CTRL + C` copy the R object name selected to the clipboard. This can be very useful.

2.4.1.7 (Mai/08/2013)

- Bug(s) fixed:
  - A bug related to the Copy buttom of Tools/Database (Rtip and Completion) was fixed.
  - A bug related to the R send: line (with empty files) was fixed.
- Options/Application/R/Rterm/Options (Rterm) has a new option: Workspace image (close without ask for save). Thanks to Roland E. Joss for the suggestion.
- Some buttons of R toolbar (print, plot, list names, list structure, edit and fix) are now enabled only with at least one open file.
- The main menu Web/R Editors/GUIs and IDEs/Tinn-R was a bit enhanced. Tinn-R project now has its own Web page.

2.4.1.6 (Mai/06/2013)

- Bug(s) fixed:
  - A bug, noticed after the release of the R 3.0.0, related to the Options/Application/R/Path (R) and recognition of the latest version was fixed.
- The user guide was revised: many thanks to Jakson A. Aquino (the main author of Vim-R-plugin).

A.2 VERSIONS RELEASED IN 2012 (3)

2.4.1.5 (Dez/06/2012)

- Bug(s) fixed:
  - A bug related to the `Options/Application/Rgui/Recognition (Rgui)` accidentally added in the prior compilation (pre-release 2.4.1.2) was fixed.
- The versions 2.4.0.2, 2.4.1.0, 2.4.1.1, 2.4.1.2, 2.4.1.3 and 2.4.1.4 were restricted to pre-release testers: Many thanks to all testers and for the suggestions!
- Basic suport to Pandoc (a universal document converter) was added.
- The main menu `Help/Main/File conversion (introduction)` was updated. Now it also contains an example of `pandoc.markdown` file.
- The User guide was thoroughly updated.
- The file `Rconfigure_default.r` was updated.
- The convertion tools (Deplate, Pandoc and Txt2tags) are currently enabled to all file extensions (including empty extension).
- The main menu `Web` was updated and has new options.
- The message of any problem related to `R/Configure/Pemanent (Rprofile.site)` was enhanced.

2.4.0.1 (Nov/07/2012)

- Bug(s) fixed:
  - A bug related to `CTRL + ENTER` was fixed. Many thanks to `Leandro Marino` for pointing it out!
  - A "bug" (*the Microsoft eventually makes some drastic changes*) related to the Windows 7 (64 bit) and the path detection of R (32-bit and 64-bit) was fixed.
- The internal shortcut `CTRL + ENTER` doesn't break the current line at the cursor position any more, i.e, it preserves the entire line content and starts a new one. Many thanks to `Leandro Marino` for pointing it out!

- The versions 2.3.7.4 and 2.4.0.0 were restricted to pre-release testers: many thanks to all testers and for the suggestions!
- The graphical interface was updated with some improvements, mainly the `Application options`:
  - A hierarchical tree view replaced the classical tabs approach. It is better for large options like now.
  - The options related to path of DVI and PDF viewer was removed. The default system for `.dvi` and `.pdf` will be used.
  - The option to close a prior instance of the viewer (DVI and PDF) before compilation is now independent. It gives more user control.
- A new toolbar `Format` was added to the main toolbar.
- A new resource allowing reformat R code (selection or whole file) using `formatR` package was added. The icon resource was placed in the `Format` toolbar, so that from this version on, the `formatR` package will be necessarily together with the already traditional `TinnR` and `svSocket` packages.
- Due to the new resource related to the reformat code the variable .trPaths was changed. As a result, it will be necessary to run again the `R/Configure/Permanent (Rprofile.site)`. In this case, **do not forget to remove any prior script generated by Tinn-R in the Rprofile.site file**.
- The `R/Hotkeys` interface was thoroughly reworked. Now it has two tabs, `Default` and `Custom`:
  - `Default`: contains the already traditional instructions of Tinn-R;
  - `Custom`: **allows the user to customize any instructions** to be send to R interpreter (thanks to Philemon Lenherr for the suggestion). The instructions must be as follows:

    Simple: `search()`. The R interpreter will receive `> search()`;

    Replace word or small selection: `View(%s, title='View of iris dataset')`. If the editor cursor is over the word `iris` or it is selected, the R interpreter will receive `> View(iris, title='View of iris dataset')`

    Replace whole file: `source(%f, echo=TRUE, verbose=TRUE)`. The R interpreter will receive `> source(.trPaths[4], echo=TRUE, verbose=TRUE)`. All rules related to send file are preserved.

- Sorry, due to thoroughly changes made to the `R/Hotkeys`, all hotkeys configured prior to this version will be lost. It will be necessary to reconfigure them all.
- The chapter `Some secrets for an efficient use` is being revised by `Ricardo Pietrobon` and soon will be completed. Many thanks for his hard work!

2.3.7.3 (Set/23/2012)

- Bug(s) fixed:
  - Not really a bug, but a correction related to prior versions which do not recognize the `Options/Application/R/Rgui/Recognition/Type` is set to `Whole` related to `R Console (32-bit)`.
- This version was compiled with **Code Gear 2007 running under Windows 7**. Previously it was compiled under Windows **Vista** or **XP**. We noticed that some boring stuff were automatically corrected by simply changing the operating system. That is, there were bugs caused by older operating systems.
- Some default startup values were changed. We hope it is now better for novices.
- Basic support to R package Knitr was added.
- Minor improvements in the graphical interface.
- The user guide has a new chapter: `Some secrets for an efficient use`.

A.3 VERSIONS RELEASED IN 2010 (10)

2.3.7.1 (Nov/24/2010)

- Bug(s) fixed:
  - A bug, accidentally introduced in version 2.3.7.0, which averted opening a file by `Enter or Double click`, a recognized Tinn-R file from Windows environment, was fixed.

2.3.7.0 (Nov/22/2010)

- Bug(s) fixed:
  - A bug related to the intermittent loss of connection (or apparent freeze) occurring on Rgui.exe was fixed.
- The versions 2.3.6.4, 2.3.6.5, 2.3.6.6 and 2.3.6.7 restricted to pre-release testers.
- The `Application options` interface was a bit changed:
  - The `Application options/R/Rterm` was split in two tabs: `Error` and `Options`. The tab Error has a new option: `Trying to find code errors (at the editor)`$*$. It enables the user to set Tinn-R in order to find code errors at the editor when sending instructions to Rterm. It may happen that the error will not be found at the right place, for example the error might be the same word appearing in a comment which comes before the actual along the code. In that case the user should use the shortcut `F3 (Find again)`. The word will appear selected, than just press *OK* until finding the right error. The first search done internally by Tinn-R has *Case sensitive* and *Whole word only* as default, but, this is not passed to the search interface, therefore the user should just select them if convenient. If the error has number among letters *Whole word only* is not a good option.
- This version is `fully compatible with Windows 7 and R 2.12.0`.
- The component XPmenu was removed from the project. Windows XP users might find the Tinn-R appearance less attractive, but the applicative is now more stable. As soon as possible, the project will get a better option for skins.
- Parts of the source code were optimized.

2.3.6.3 (Nov/14/2010)

- Bug(s) fixed:
  - A small bug (introduced in version 2.3.6.0) related to interactive use of Rterm interface, when R returns only one value, was fixed.
- Parts of the source code were optimized.

2.3.6.2 (Nov/13/2010)

- Bug(s) fixed:
  - A bug (introduced in version 2.3.6.1) related to automatic recognition (and setting) of the paths of Rterm and Rgui from R version 2.12.0 was fixed.
- Parts of the source code were optimized.

2.3.6.1 (Nov/12/2010)

- Bug(s) fixed:
  - Permanent configuration of the file Rprofile.site from the menu option: `R/Configure/Permanent (Rprofile.site)`.
- Parts of the source code were optimized.

2.3.6.0 (Nov/10/2010)

- Bug(s) fixed:
  - Paths of Rterm and Rgui from R version 2.12.0 were fixed.
- The `Application options/R/Path` has a new option: `Architecture (bit)`. It enables the user to set R in order to run Rterm.exe or Rgui.exe in either 32 or 64 bit. They run independently one from the other. If the above dialog option `Use latest version (always)` is set to **No**, the dialog box `Architecture (bit)` becomes disabled. In other words, the path must be manually set. In this case, the user preference (if valid) will not be changed when Tinn-R is starting. If the dialog `Use latest version (always)` is set to **Yes**, the path of the latest R version (32 or 64 bit) will found automatically. In case the user's computer is 64 bit and it has the latest R version installed with both options (32 or 64 bit) the latest one has the preference.

- Rterm interface now recognizes the single occurrence of a string pattern when using `TAB` in the prompt. The general behavior is not as friendly as in Rgui or in Linux console, but it is working.
- Parts of the source code were optimized.

2.3.5.2 (Apr/11/2010)

- The `User guide` was revised by `Ricardo Pietrobon` in an attempt to improve its flow and style. This is a work in progress, and so we should be improving it over time!

2.3.5.1 (Mar/28/2010)

- Version restricted to developers.
- The `User guide` was revised by `Ricardo Pietrobon` to improve its style and readability. So far, we have partial revisions implemented to chapters `Overview, Basics, Working with, Menu description and parts of What is new`.
- The `Application options/R/Basic` has a new option: `Smart (all send)`. When this option is set to `Yes`, all single line commands will not be sent through `source(...)`, but instead as `Send line`.

2.3.5.0 (Mar/04/2010)

- Bug(s) fixed:
  - Small corretions in the *Application options* interface.
- Parts of the source code were optimized.
- The Rterm interface has now a simple toolbar including the more usual options.
- The `User guide` is being revised by `Ricardo Pietrobon` and soon will be more readable and intelligible. Up to now only chapters `Overview and Basics` have been worked out. Many thanks for his hard work!

2.3.4.4 (Jan/10/2010)

- Bug(s) fixed:
  - A bug related to the visibility of the buttons *Send contiguous* was fixed.

A.4 VERSIONS RELEASED IN 2009 (16)

2.3.4.3 (Dec/21/2009)

- Parts of the source code were optimized.

2.3.4.2 (Dec/18/2009)

- Bug(s) fixed:
  - A bug related to the function `debug (package base)` in the Rterm interface was fixed. It was generating an exception `Access violation at address NUMBER in module 'Tinn-R.exe'. Read of address FFFFFFFF`. This bug started in version 2.3.4.0 (Dec/06/2009).

2.3.4.1 (Dec/13/2009)

- Bug(s) fixed:
  - A bug related to `Search in Files` and its links in the *Tools* panel was fixed. It was not going to the correct line in the file. This bug was related to the implementation of the resource *Remember file state* in version 2.3.2.5 (Nov/03/2009).
- The user can now hide/show the button `Editor: current line to top` in the *R toolbar*.

2.3.4.0 (Dec/06/2009)

- Bug(s) fixed:
  - A bug related to the package `sem` by John Fox (functions: `read.moments` and `specify.model`) which generated an error when submitting line by line within *Rterm* interface was fixed. Many thanks to `Frank` for pointing it out!
- Parts of the source code were optimized.
- The menu *R/Rterm/Clear* and the pop-up menu Rterm (IO and Log), both related to *Clear* option, were changed. This change allows more specific control over *IO* and *Log* of *Rterm* interface.
- Two new options enable the user to send contiguous lines of script to the `R` interpreter.
- The small script generated by Tinn-R in the file Rprofile.site was changed:

  - The parameter `dep=TRUE` was removed from the line

```
install.packages(necessary[!installed], dep=TRUE)
```

    since the `Hmisc` package, which enables Tinn-R to export `R` objects to TeX format, has several dependencies. This change will speed up the basic `R` configuration.

```
## Check necessary packages
necessary <- c('TinnR', 'svSocket')
installed <- necessary %in% installed.packages()[, 'Package']
if (length(necessary[!installed]) >=1)
install.packages(necessary[!installed])
```

  - Under the *Rterm* interface the graphical menu should enable the user to choose the repository for a current session. However, this is inconsistent, sometimes showing this option and sometimes not. Therefore, the best option is to set the preferred repository from the file Rprofile.site.

2.3.3.1 (Nov/10/2009)

- The menu *Tools/Utils* was removed from the executable: it is restricted only to developers and we forgot to make it not visible.

2.3.3.0 (Nov/09/2009)

- Parts of the source code were optimized.
- The menu *View* was enhanced with a new option *Word wrap*. It allows the user to control the *Editor*, *Rterm/IO* and *Rterm/Log* word wrap. Word wrap is a feature of most text editors, word processors, and web browsers, of breaking lines between and not within words, except when a single word is longer than a line.

2.3.2.6 (Nov/07/2009)

- Bug(s) fixed:
  - A bug related to *Rterm interface* and `Auto hide` option was fixed.
- The automatic WordWrap option of Rterm interface is now off.

2.3.2.5 (Nov/03/2009)

- Bug(s) fixed:

  - A bug related to R identification, if *Options/Application/R/-Path/Use latest installed version (always)* option is *Yes* was fixed. This bug was detected only after the R 2.10.0.

- Parts of the source code were optimized.
- Tinn-R now has the *Remember file state* setting option. The file states are: all marks (0..9), the position of the cursor and top line of the file. It was implemented using a XML database (Cache.xml). It can be found at *Options/Application/Main/General/Remember file state*.
- The option Send *Marked block* was enhanced. Now it works as below:
  - **The file has no marks**: the option will not be available (gray);
  - **The file has one or more marks and the cursor is above the first mark, or below the last**: all text (above or below this mark) will be sent, according to the cursor's position (above or below the mark);
  - **The cursor is between any two adjacent marks**: all text between those two marks will be sent.
- Under *Rterm* interface it is possible to use the TAB as follow: > `ba (followed by TAB)`. This procedure will send to R interpreter the instruction `apropos('^bla', case.insensitive=FALSE)` and it will not be visible. R will returns a character vector giving the names of all objects in the search list matching `ba`. For example:

```
> ba (followed by TAB)
[1] "backsolve"             "backSpline"            "bacteria"
[4] "balanceMethodsList"    "ballocation"           "bandwidth.kernel"
[7] "bandwidth.nrd"         "barplot"               "barplot.default"
[10] "bartlett.test"         "base.-.POSIXt"         "base.+.POSIXt"
[13] "base.difftime"         "base.help"             "base.library"
[16] "base.loadhistory"      "base.lockEnvironment"  "base.rbind.data.frame"
[19] "base.save.image"       "base.savehistory"      "baseenv"
[22] "basehaz"               "basename"

> ba
```

- The family *rmControls* of components was removed from the project.

2.3.2.3 (Ago/06/2009)

- The *Application options interface* was enhanced.
- Parts of the source code were optimized.

2.3.2.2 (Jul/20/2009)

- Bug(s) fixed:
  - A bug related with *Hotkeys (operational system)* when changing the status (Active not Active).

2.3.2.1 (Jul/19/2009)

- Bug(s) fixed:
  - An undesired and potentially danger option in the menu *Tools/Utils*, used only in the development, was removed.

2.3.2.0 (Jul/18/2009)

- Bug(s) fixed:
  - All bugs related to database pointed out by users.

2.3.1.0 (Jul/15/2009)

- Bug(s) fixed:
  - All bugs related to database pointed out by users.

2.3.0.0 (Jul/10/2009)

- Bug(s) fixed:
  - The error message when typing `CTRL + TAB` inside the *Rterm* interface whenever it was not split.
  - It now remembers the position of the *Tabs files* (top or botton) when starting.
  - It now properly organizes the *Tabs files* in relation to other toolbars whenever the user uses the `show/hide` option in the toolbars.
  - The intermittency of completion resources.
  - The *Auto completion* and *Data completion* now recognizes split by a dot as a complete word: for example `my.function(` and `my.data$`.
  - Under Windows Vista the option *R/Configure/Permanent (Rprofile.site* now checks if the user has administrative privileges to change the content of the file `Rprofile.site`, before inserting the necessary script. If the user receives an error message, it is necessary to manually change the security properties to enable `full control` of the folder `etc` where `R` is installed.

- The *Completion* resource migrated to XML, it is more flexible and easy to use. Now it is located in the the menu *Tools/Database*.
- *R card* and *R tip* are now located in a more convenient place: *Tool/-Database*.
- The *R tip* resource was updated.
- Menu *Format/Block* was removed and all associated resources were relocated to a more logic place: *Format/selection*.
- The *User guide* was expanded/enhanced in various topics.
- The *Application options interface* was enhanced.
- A new option in the *Application options* allows more specific recognition of `Rgui`. Now it is possible to avoid any windows caption with the word `Console` to be recognized as a `R` instance.
- The interface *Tinn-R hotkeys* was fully reworked and it is now more simple and efficient.
- Parts of the source code were optimized.
- A new resource was added to the *R send*: `Clipboard`. It enables the user to send the content of the clipboard easily to Rterm.
- Sorry, due to bugs the highlighters *Deplate* and *Txt2tags* were removed from the project. New ones will be made in the future.

2.2.0.2 (Feb/09/2009)

- Bug(s) fixed:
  - Using `TinnR package version 1.0.1 or 1.0.2` Tinn-R did starts when `R` starts with the instructions below in the Rprofile.site:

```
# uncomment the line below if you want Tinn-R starts always \RR{} starts
options(IDE='C:/Tinn-R/bin/Tinn-R.exe')
```

    The origin of this bug was the change of the packages `svIDE` (and others no longer necessary) to TinnR package. One function that should do the job was not present (`TinnR package version 1.0.1 or 1.0.2`). In the `new version of the TinnR package (1.0.3)`, this function `trStartIDE` was added. The option `R/Configure/Permanent (Rpfile.site)` will generate a new script:

```
##============================================================
## Tinn-R: necessary packages and functions
## Tinn-R: >= 2.2.0.2 with TinnR package >= 1.0.3
##============================================================
## Set the URL of the preferred repository, below some examples:
options(repos='http://cran.at.r-project.org/')      # Austria/Wien
#options(repos='http://cran-r.c3sl.ufpr.br/')       # Brazil/PR
#options(repos='http://cran.fiocruz.br/')           # Brazil/RJ
#options(repos='http://www.vps.fmvz.usp.br/CRAN/')  # Brazil/SP
#options(repos='http://brieger.esalq.usp.br/CRAN/') # Brazil/SP

library(utils)

## Check necessary packages
necessary <- c('TinnR', 'svSocket')

installed <- necessary %in% installed.packages()[, 'Package']
if (length(necessary[!installed]) >=1)
  install.packages(necessary[!installed])

## Load packages
library(TinnR)
library(svSocket)

## Uncomment the two lines below if you want Tinn-R to always start R at start-up
## (Observation: check the path of Tinn-R.exe)
#options(IDE='C:/Tinn-R/bin/Tinn-R.exe')
#trStartIDE()

## Option
options(use.DDE=T)

## Start DDE
trDDEInstall()

## Short paths
.trPaths <- paste(paste(Sys.getenv('APPDATA'),
                        '\\Tinn-R\\tmp\\',
                        sep=''),
                  c('',
                    'search.txt',
                    'objects.txt',
                    'file.r',
                    'selection.r',
                    'block.r',
                    'lines.r'),
                  sep='')
```

If you uncomment this part:

```
## Uncomment the two lines below if you want Tinn-R starts always R starts
## (Observation: check the path of Tinn-R.exe)
options(IDE='C:/Tinn-R/bin/Tinn-R.exe')
trStartIDE()
```

The new TinnR package will do the job!

2.2.0.1 (Feb/05/2009)

- Bug(s) fixed:
  - Latex font *Enphase* was fixed. It was inserting *textbf{}* instead of *emph{}*.
  - Save and load workspace is now enabled only if Rterm is running.
  - A bug associated with the *Color preferences interface* related to *Txt2tags* and *Deplate* syntax, not allowing to change the background color of the root element in the correct way was fixed.
- All prior documentation of the Tinn-R project was updated. Some parts were expanded and others were excluded, new ones were generated and, finally, all were joined in the new *User guide*. This *What is new* is now part of this user guide. The source files (written in Txt2tags) of this User guide are available in the folder `doc/english/user_guide` where Tinn-R is installed. This way, we hope that the user will be able to help us in making it better, day by day, by sending us any useful contribution.
- The *R toolbar* can now be docked at left, top, right and bottom side of the main interface. Some issues related to *Rterm* and *Tools* interface when dragging the `R` tools bar, have not completely been solved yet. In order to fix any problem, hide and show again the *Rterm* or *Tools* interface.
- The match brackets resource (default shortcut is `CTRL + B`) was added also to the Rterm interface (*IO* and *Log*).
- The *Tools* interface was a bit reworked and the menu *Views* was changed to accommodate the changes.
- The menus *View* and *Help* were a bit reworked.
- The send and control `R` resources were extended to all instances of the synEdit class. In other words, if you put the cursor in any word, or select any text in the *Editor* (split or not), *IO* or *Log* (docked or not, in the same or distinct monitors) interface and, after this, select an action (print content, plot, etc) it will be executed.

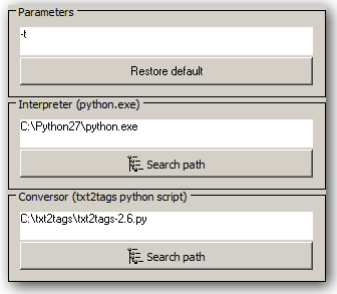
A.5 VERSIONS RELEASED IN 2008 (14)

2.1.1.6 (Nov/17/2008)

- Bug(s) fixed:
  - All fonts of *Tools/Markup* interface are now visible.
- The *Application options* was a bit reworked.
- Due to focus changes behavior in the latest Tinn-R version (2.1.1.5), the focus control button (options toolbar) will be not enabled if Rterm is running. In this case, the focus will be always returned to the interface (editor or Rterm) that has the prior focus before all send/control options.

2.1.1.5 (Nov/12/2008)

- Bug(s) fixed:
  - Related to *Inverse DVI Search*;
  - Focus control working with dual monitor.
- The latest Windows installer version is 2.3. Therefore, it was necessary to adapt Tinn-R to work with the interpreter Phyton for Windows (python.exe) and the python script to make the conversion (txt2tags). The current version of Txt2tags is 2.5.
- To install and configure the necessary resources follow these simple steps:
  1. Download and install the interpreter Python;
  2. Download and unzip Txt2tags inside any folder anywhere in your computer;
  3. Inside of Tinn-R, go to 'Options/Application/Processing/Txt2tags' and inform the necessary: parameters (*-t* is the default) and the paths of interpreter (`python.exe`) and the converter (`txt2tags python script`);
  4. It is enough to use these nice tools in the Tinn-R project.



2.1.1.4 (Nov/10/2008)

- Bug(s) fixed:
  - Closing the applicative if *Rterm* is runnig (random bug).
  - *Options: return focus after sending to R*:

    If in editor, the focus shifts back after sending to R;

    If in *Rterm* (or *Rgui*), the focus does not jump back to editor when you press return: `ENTER` (prompt line), or `CTRL + ENTER` (any prior line).

- The *Options/Application/Main* menu has a new `Dock` page. It enables the user to fix any possible problem related to visualization (*dock/hide*) and layout of the `Tools and Rterm` interfaces.
- The resources of *Rterm* interface were extended:
  - All resources available enabling the control of `R` are now also available to *IO* and *Log* interfaces: print content, plot, list names, etc;
  - To all options enabling the control of R, THE FOCUS WILL BE MAINTENED IN THE CURENT WORK INTERFACE Editor or IO, DISREGARDING the Options: return focus to editor after send/control `R` (toogle).
- Rterm interface and debug package:
  - Changes were made to the debug package (1.0.2) on the message system (*stdout* and *stderr*). The default option is not compatible with Rterm interface implementation.
  - The best way to make it compatible again is to add the option below in the Rprofile.site file:

```
options(debug.catfile = 'stdout')
```

2.1.1.3 (Nov/04/2008)

- Bug(s) fixed:
  - *Application options/Appearance* when the user select *Cancel*.
  - *R control: packages (both: Load and Remove)* and *Rterm interface*.
  - Rterm interface under package *debug* of Mark V. Bravington when the user type `qqq()` to quit the debugger.
- The interface *Go to line number* was a bit reworked.

2.1.1.2 (Oct/20/2008)

- The appearance of the main menu and all pop-up menus were improved.
- Now Tinn-R is able to perform `inverse DVI search`. It is only necessary to set the path of the binary of Tinn-R and the parameter for file and line in your DVI previewer. For example, using the YAP of Miktex, the necessary configuration will be (assuming the default Tinn-R path):

```
C:\Tinn-R\bin\Tinn-R.exe "%f;%l"
```

  Be sure that there is not space between the parameters %f(related to file) and %l(related to line).

  Inside Tinn-R (*Options/Application/Processing/Latex/DVI*) it is necessary to add the compilation Miktex parameter: latex -c-style-errors `-src-specials`. Tinn-R can do it automatically with the option *Restore default*. Now, it is:

```
latex -c-style-errors --src-specials
and
bibtex --src-specials
```

2.1.1.1 (Oct/15/2008)

- Bug(s) fixed:
  - Bugs of the version 2.X.X.X (prior of this version) related to the *R/Configure/Temporary (current session)* and *R/Configure/Permanent (Rprofile.site)* were fixed.

  - A bug related to the *Rterm* interface with incomplete instructions ('+') was fixed. An undesirable carriage return after the '+ CR', the origin of the bug, was eliminated.
  - A bug related to the status (show/hide) of the toolbars *Spell* and *Search* when closing and starting the application was fixed.

- Version restricted to pre-release testers.
- The way Tinn-R creates the variable `.trPaths` was changed. Now it is automatic. It was posted on Tinn-R forum by KeithJ (keith_jewell) - 2008-09-15 16:00. It is very useful in laboratories where most users have their own account but use the same computer. Now it is not necessary to adapt the file `Rprofile.site` for each user and R session any more. Many thanks to `keith Jewell` for the nice suggestion.

```
.trPaths <- paste(paste(Sys.getenv('APPDATA'), '\\Tinn-R\\tmp\\', sep=''),
c('', 'search.txt', 'objects.txt', 'file.r', 'selection.r', 'block.r', 'lines.r'), sep='')
```

- The option *Save/Load* workspace to the Rterm interface was added. Many thanks to `Maria Conceição` for the suggestion.
- The *Tools* and *Rterm* interfaces were reworked and now both are dockable. It makes the interface flexible and user customizable. Many thanks to `Thomas Petzoldt` for the suggestion.
- A new option was added to the *Options*: `max.deparse.length (echo=TRUE)`. It is used if `echo is TRUE` and gives the maximal number of characters output for the deparse of a single expression.
- The weblinks links of the menu *Web* were all updated.
- In order to attend to the request of some users, the menu (and related pop-up menu) *Edit* go back to the project interface with a new implementation. Due to the large frequency of the use of class SynEdit (editor, editor split, IO, Log, etc), the action will be apllied in the active (selected) instance of the class SynEdit.
- The *font* of the *Rterm* interface is now updated after changes to *Options/Editor/Display/Font*.

2.0.0.7 (Sep/04/2008)

- Bug(s) fixed:
  - A bug related with the package *Rterm* interface was fixed.

2.0.0.6 (Aug/21/2008)

- Bug(s) fixed:
  - A bug related to the package *Matrix* was fixed. Many thanks to `Frank` for point it out!
- The *Rterm* interface can be used to connect with `R` as a remote server. Sorry, it is already running, but it was not finished yet!

2.0.0.5 (Aug/17/2008) - pre-release

- Bug(s) fixed:
  - A bug related to the function *debug(base)* was fixed. Many thanks to `Steven` for pointing it out!

2.0.0.4 (Aug/12/2008) - pre-release

- Small corrections and adaptations suggested by testers. Many thanks to `Steven`.
- The `R` history now stores up to 100 instructions.

2.0.0.3 (Aug/05/2008) - pre-release

- Version 2.0.0.2 (Jul/23/2008) was released to some selected users for tests; it was the lastest version compiled under the IDE `Delphi 7` of Borland.
- This version, and from now on, all versions will be compiled under the IDE `Code Gear 2007`, the latest of Borland.

2.0.0.2 (Jul/23/2008) - pre-release

- Small corrections suggested by pre-release testers. Many thanks to `John`, `Steven` and `Frank` for the tests and suggestions.
- This version, unlike 2.0.0.1, is fully compatible with the very useful package *debug* (of Mark Bravington). It remains an unsolved problem to submit, when debuging, an external script with incomplete line, like the one below:

```
plot(rnorm(1e2), main = 'It will cause error!')
```

2.0.0.1 (Jul/22/2008) - pre-release

- Version restricted to pre-release testers.
- The structure of the *ini* and the *routine of initialization* were deeply reworked:
  - The old backups `will not be compatible anymore with this one and future versions`;
  - When used for the first time, this version will try to recognize almost all prior user preferences.
- A new folder, `bkp`, was added to the ini files structure. It contains all backups of all prior user preferences not (or partially) compatible with the new versions. The control of all default resources are now individual, i.e: *custom*, *data*, *latex*, *shortcuts* and *syntax*.
- The *R explorer* functionality was reworked:
  - The functions (`trObjSearch` and `trObjList`) were reworked. These functions are distributed with the package svMisc (>= 0.9.40) of Philippe Grosjean;
  - To make the `R` interface cleaner, a new variable `.trPath` is used as additional parameter to the two functions above. It will avoid a long string like
    path="C:/Documents and settings/User/Application Data/Tinn-R/Tmp/..."
    to Windows XP or
    "C:/Users/jcfaria/AppData/Roaming/Tinn-R/tmp/..."
    on Windows Vista;
  - The `R` object `.trPath` is a *list* described below:

```
.trPath <- list(
Tmp = 'C:/Users/jcfaria/AppData/Roaming/Tinn-R/tmp/',
Search = 'C:/Users/jcfaria/AppData/Roaming/Tinn-R/tmp/search.txt',
Objects = 'C:/Users/jcfaria/AppData/Roaming/Tinn-R/tmp/objects.txt',
File = 'C:/Users/jcfaria/AppData/Roaming/Tinn-R/tmp/file.r',
Selection = 'C:/Users/jcfaria/AppData/Roaming/Tinn-R/tmp/selection.r',
Block = 'C:/Users/jcfaria/AppData/Roaming/Tinn-R/tmp/block.r',
Lines = 'C:/Users/jcfaria/AppData/Roaming/Tinn-R/tmp/lines.r'
)
```

  - The best way to set the variable `.trPath` inside of `R` is using the options: `R/Configure/Temporary` or `R/Configure/Permanent`, both can be found in the main menu of Tinn-R `R/Configure`;
- The options to send *File*, *Selection*, *Block* and *Lines to end page*, were reworked:
  - The objective was to maintain the `R` interface cleaner, thus avoiding long strings;

  - All above are also dependent on the variable `.trPath`;
  - As already noted, the best way to set the variable `.trPath` inside R is using the options: `R/ Configure/ Temporary` or `R/ Configure/Permanent`. Both can be found in the main menu of Tinn-R `R/Configure`

- The source code of Tinn-R was deeply reworked. The aim was to maintain the prior user knowledge, the stability, and the structural simplicity, but add more flexibility and power to the GUI, mainly associated with the new `Rterm` interface. The *IO* and *Log* interfaces are instances of the class synEdit:

  - `IO`: the aim was to add flexibility and power, i.e., joining the power of synEdit (editor) and the functionality of a common console. All prior user knowledge of the resources associated with the editor were preserved: marks, shortcuts, syntax, match brackets, tips, code completion, data completion, etc;
  - `Log`: has two basic objectives:
    1. To make the *IO* interface cleaner;
    2. To avoid synchronization difficulties with the inter process communication (IPC) called *pipe* in use.
  - The shortcuts and the pop-up menu makes it easy to change among the interfaces: *Editor*, *IO* and *Log*:
    1. The common Windows shortcut `CTRL + TAB` changes the active page (IO-Log).
    2. Any prior line can be sent another time by just placing the cursor anywhere on and typing: `CTRL + ENTER`;
  - The last line of the *IO* interface (the prompt) has special features:
    1. It has some restrictions for edition and navigation;
    2. `ALT+DOWN` and `ALT+UP` are the shortcuts (prior/later) for command history. Both are continuous, cyclic and have a 50 lines limit (we think it is sufficient, but if necessary it can be increased to 100 or more).

- When more than one recognized instance of `R` is running the priority order is:

  1. Rterm;
  2. Rgui;
  3. Rserver (remote);

- The use of the clipboard as IPC was removed for all. It was an old request of users to avoid conflict with other application, mainly with the `Open Office` suit.

- The communication with `Rterm` is more specific and efficient than with `Rgui`. Therefore, it will receive more attention from the developers from now on. The interface with *Rterm* is not finished yet, but it is running nicely...

  - If some problem happens: press ENTER;
  - If it is not solved, type anything and press ENTER;
  - If it still not solved, sorry: close and restart the *Rterm* instance;
  - Remember: it is not finished yet!

- The TCP/IP resources now are used only with two objectives:

  1. `Local`: to make the *Rterm* and *Rgui* console cleaner;
  2. `Remote`: for all: send, control and output.

- A new interface *Work expl.* was added to the *Tools* interface. It will always show the folder and files of the latest file opened. It is simpler and has complementary resources to the textitWindows expl. interface.

- The menu *Edit* and associated pop-up menu were removed, but, all the functionality was preserved under shortcuts. To set the preferences see *Options/Editor/Keystrokes*.

- The *Tools* interface was a bit reworked and has new resources.

- The main menu was a bit reworked.

- The interface of the application options was a bit reworked.

- Due to new resources (*IO* interface related with `Rterm`) the default shortcuts to view *Line numbers* and *Special characters* were changed to `CTRL + ALT + L` and `CTRL + ALT + K` respectivelly. Now `CTRL + L` clears the *IO* and *Log* interface, like `Rgui`.

- The main component synEdit was updated to the latest stable version and minor bugs were fixed.

- The descriptions of the synEdit editor options is:

Option	Description
Auto indent	Will indent the caret on new lines with the same amount of leading white space as the preceding line
Auto size scroll width	Automatically resizes the MaxScrollWidth property when inserting text
Drag and drop editing	Allows you to select a block of text and drag it within the document to another location
Alt sets column mode	Holding down the <ALT> key will put the selection mode into columnar format
Maintain caret column	When moving through lines w/o cursor past EOL, keeps the X position of the cursor
Want tabs	When active <TAB> and <SHIFT> <TAB> act as block indent, unindent when text is selected
Smart tabs	When tabbing, the cursor will go to the next non-white space character of the previous line
Smart tab delete	Similar to Smart Tabs, but when you delete characters
Enhance home key	Enhances HOME key positioning, similar to visual studio
Enhance end Key	Enhances END key positioning, similar to JDeveloper
Hide scrollbars as necessary	If enabled, then the scrollbars will only show when necessary. If you have ScrollPastEOL, then the horizontal bar will always be there (it uses MaxLength instead)
Disable scroll arrows	Disables the scroll bar arrow buttons when you can't scroll in that direction any more
Half page scroll	When scrolling with page-up and page-down commands, only scroll a half page at a time
Scroll by one less	Forces scrolling to be one less
Scroll past end of file	Allows the cursor to go past the end of file marker
Scroll past end of line	Allows the cursor to go past the last character into the white space at the end of a line
Show scroll hint	Shows a hint of the visible line numbers when scrolling vertically
Scroll hint follows mouse	The scroll hint follows the mouse when scrolling vertically
Tabs to spaces	Converts a tab character to a specified number of space characters
Trim trailing spaces	Spaces at the end of lines will be trimmed and not saved
Group undo	When undoing/redoing actions, handle all continuous changes of the same kind in one call instead undoing/redoing each command separately
Right mouse moves cursor	When clicking with the right mouse for a pop-up menu, move the cursor to that location
Show special chars	Shows special characters

A.6 VERSIONS RELEASED IN 2007 (26)

1.19.4.7 (Dec/23/2007)

- *Application option* was a bit improved. Now, it is posssible to set Tinn-R to close previous instance of the viewer (PDF or DVI) in the *Processing/Latex/More* options. Makes it easier to compile under Latex, as Miktex will not gives the message: `I can't write the file ...` in the DOS prompt. Note that `any instance of the viewer (if opend)` with the caption `'FileBeeingCompiled'.pdf` will be closed.

1.19.4.6 (Dec/17/2007)

- A very simple splash screen was added to application starting.

- The functionality of *Latex/Accents* was improved. Now if you have a selection in the editor it will be filled inside the brackets '{}', otherwise, the simple accent will be inserted.

1.19.4.5 (Dec/14/2007)

- Bug(s) fixed:

  - A couple of bugs related to the prior version *1.19.4.4 (Dec/13/2007)* were fixed.

- Parts of the source code were optimized.

1.19.4.4 (Dec/13/2007)

- The appearance of the *Latex symbols* now have a better layout, alphabeticalilly ordered. The structure of ini file, related with to it, was also changed.

- This version enables the user to set two comment(s) character(s): the main (used for all syntax) and to latex. The options were added to the main menu *Format/Block*: it is possible to *comment all, uncomment first* and *uncomment all*. The *Application options* was a bit reworked to allow the user to set the preferred latex comment (%, %%, %%%, etc).

- Some default shortcuts were changed. The *ini file related* will be updated to reflect these changes and a backup of the old resource file will be made at first use of this version.

1.19.4.3 (Dec/12/2007)

- Bug(s) fixed:
  - A bug related with the new resource *Count* in latest version *1.19.4.2 (Dec/11/2007)* was fixed.
- The tool *Markup/Latex* was improved.
- *Latex Itemization and Enumeration* procedures were a bit improved.
- The color of the `matched brackets` are now user configurable. Set it at *Options/ Syntax and colors/ Preferences/ Brackets(FG)*.

1.19.4.2 (Dec/11/2007)

- The tool *Markup/Latex* was improved by adding a toolbar.
- Parts of the source code were optimized.
- The *Application options* interface was a bit reworked.

1.19.4.1 (Dec/01/2007)

- Bug(s) fixed:
  - A couple of bugs related to the prior version *1.19.4.0 (Nov/29/2007)* were fixed.
- The structure of the *Tinn.ini* file and the *routine of initialization* were a bit reworked. So, the old backups `will not be compatible anymore with that one and future versions`. This version will recognize the basic old system configurations, but not all preferences. Sorry for the inconvenience.

1.19.4.0 (Nov/29/2007)

- The *Main menu* was a bit reworked and some options have now a better logic place.
- The tool *Markup* was improved by adding a graphical interface to *Latex* symbols:
  - This is the first approach to a functional latex symbol classification:

```
Functional LaTeX Symbols Classification Criteria (according with the KISS principle):

1. Empty
2. Natural order (ex: Greek: alpha, beta...; Solar system: Sun, Mercury...)
```

```
3. Usability
4. Structural simplicity
5. Number of straight lines
6. Number of curved lines
7. Number of sloped lines
8. Clock wise rotation

Authors: José Cláudio Faria and Jorge Alexandre Wiendl
Date   : 11/27/2007 00:55:20
KISS   : Keep it simple, stupid
```

  - We would like it if advanced latex users could help us with this classification;
  - The graphical interface is based on the text files organization of the folder *latex*, located at `Ini files`;
  - Once the order of the symbols (number controlled) in each folder is changed, after restarting Tinn-R, it will reflect this order and maintain all functionality. Therefore, it is very flexible;
  - It is recommended that the numeration criteria used in the classification (ex: `001_mysymbol1.gif`, `002_mysymbol2.gif`) be maintained;
  - With the exception of `png`, many image formats can be used;
  - `Please, don't remove or rename any of the folders or their names`;
  - It was a hard task, so, we don't consider the job finished yet: all users will be welcome with their contributions.

- The main menu has a new option *Insert/Latex*. It enables the user to make *Numerical elements*: `Array, Matrix, Table and Tabbling`.

1.19.3.1 (Nov/15/2007)

- Bug(s) fixed:
  - A couple of bugs related with *ini file* were fixed.

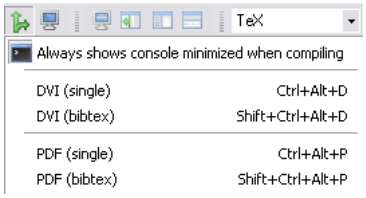
1.19.3.0 (Nov/12/2007)

- Bug(s) fixed:
  - A couple of bugs related to the *Project* interface were fixed and its interface was enhanced.
  - A bug related to the *Most Recent Used (MRU)* files was fixed.
- All prior Tinn-R version of the release 1.19.3.X were considered pre-released (restricted to beta testers only). Many thanks to all testers.

- Good news for Sweave users: debug, i.e, send line by line a `Sweave script`, was enhanced. Now, Tinn-R will `search automatically only inside of the chunks` and will disregard all LaTeX texts. `You must start this resource inside of any chunk`.
- The structure of the *Tinn.ini* file was a bit reworked. So, the old backups `will not be compatible anymore with that one and future versions`. This version will recognize the basic old system configurations, but not all preferences. Sorry for the inconvenience.
- The default *ini* file for main shortcuts was changed from *shortcuts.bin* to *shortcuts.txt*. Therefore, `any old preferences will be lost`. It will be ncessary to define all the personal preferences again. Sorry for the inconvenience.
- The main component *SynEdit* was updated to the latest stable version (2.0.6).
- The *Search* results have now the same appearance of the *Text* highlighter.
- In *Tools* the interface *Tags* was renamed to *Markup*. The next resource (we are working in it) will be related with *LaTeX*.
- Parts of the source code were optimized.
- The *Application options* interface was a bit reworked.
- The pop-up menu of *Project* interface was a bit enhanced.
- The *status bar* functionality was a bit enhanced. Now you can click inside a specific panel to change the options.
- The way as *Tinn-R* closes the *Rgui* was enhanced.
- The way the brackets are highlight (parent matching) was changed. Now it will contrast with the color with the *Active line highlighted*; see in (Options/Main/Application).
- The *Results* interface was a bit reworked and has now new resources: *Ini log* and a new button enabling full expansion. It is a good idea to check the content of the *Ini log* if any thing is wrong.

1.19.2.3 (Mar/05/2007)

- Parts of the source code were optimized.
- This version enables you to compile `LaTeX` files with `bibtex` option:

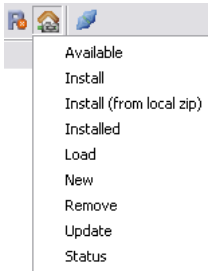


1.19.2.2 (Feb/22/2007)

- Parts of the source code were optimized.

1.19.2.1 (Feb/19/2007)

- Parts of the source code were optimized.
- The first approach to a easy R package manager was implemented:



- To avoid R flicker, if TCP/IP connection is active and the *R output* is visible, the *Clear console (F9)* and *Clear all (F12)* will not work on the R console. We will be searching for the best solution.

1.19.2.0 (Feb/16/2007)

- Bug(s) fixed:
  - A bug related to the prior version and *R toolbar* was fixed.

1.19.1.13 (Feb/13/2007)

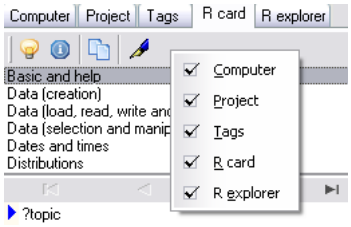
- Bug(s) fixed:
  - A bug that occurred when organizing the *main toolbar*, in the first use, was fixed.
- Parts of the source code were optimized.

- An experimental graphical interface for tags was added to the program. It was made by adding a new tab named *Tags* on the panel *Tools* and it will aid the user to write Txt2tags, TeX, HTML and others from Tinn-R in graphical mode. In the current version only Txt2tags interface was implemented.

- The structure of the *Tinn.ini* file was a bit reworked. So, the old backups will not be compatible anymore with this and future versions. This version will recognize the basic old system configurations, but not all preferences. Sorry for the inconvenience.

- The main menu *View/Tools* was a bit reworked and has new resources.

- The *Tools* window has now a new pop-up. It enables you to choose the visible pages:



1.19.1.12 (Feb/11/2007)

- *Search* and *Replace* interface was a bit reworked.

1.19.1.11 (Feb/07/2007)

- Bug(s) fixed:

  – A bug related to the prior version and *R toolbar* (flicker) was fixed.

1.19.1.10 (Feb/04/2007)

- Parts of the source code were optimized.

- The `Tinn-R card` was updated.

- The *Application options* interface was a bit reworked and the *R resource visibles* was enhanced. Now if this option is not marked, all `R` resources will not be visible.

- A new option was added to the main menu *View: R resources visible*.

1.19.1.9 (Jan/25/2007)

- Bug(s) fixed:
  - A bug related to *R toolbar* was fixed.
- Parts of the source code were optimized.

1.19.1.8 (Jan/24/2007)

- Parts of the source code were optimized.

1.19.1.7 (Jan/23/2007)

- Bug(s) fixed:
  - Bugs related to selection in 'smLine' mode, were fixed. Many thanks to `SynEdit team`.
- Parts of the source code were optimized.
- The main component *SynEdit* was updated to the latest version.

1.19.1.6 (Jan/21/2007)

- Bug(s) fixed:
  - A bug related to the project interface was fixed.
  - Small bugs, related to the editor in split mode (vertical or horizontal), were fixed.
- Parts of the source code were optimized.

1.19.1.5 (Jan/09/2007)

- Parts of the source code were optimized.
- Small adjustments were made to the program interface.

1.19.1.4 (Jan/05/2007)

- Parts of the source code were optimized.
- The use of clipboard between `R` and Tinn-R was enhanced. For example, instructions such as the ones below are now possible:

```
a <- round(rnorm(1000), 2)
b <- round(rnorm(1000), 2)
c <- round(rnorm(1000), 2)
d <- data.frame(a, b, c)
write.table(d, file="clipboard")
```

Tinn-R is frozen until R releases the clipboard. Thanks to Igor Kojanov for pointing out the problem and the soluction's direction.

- In the first use of the program, default options were changed.
- The *R/Database* interface was reworked:
  - A new option enabling the user to restore the original database was added.
  - After changes it is necessary to type *Save*. Otherwise, a ll changes will be lost when closing the interface.
  - The button *Save and close* was removed.

1.19.1.3 (Jan/04/2007)

- Parts of the source code were optimized.
- Menu *R* was a bit reworked.
- Icons were changed.
- In the first use of the program, default options were changed.
- The *R/Database* interface was a bit reworked. It now has a new option enabling the user to restore the original database.

1.19.1.2 (Jan/01/2007)

- The menu *R* was a bit reworked and now has a new option: *Customize*. It enables the user to customize the files Rcompletion.r and Rconfigure.r. Before that, administrator privileges were necessary to personalize these very useful files.
- The folder where Tinn-R stores its internal files has now a new sub-folder named *custom* that stores the files Rcompletion.r and Rconfigure.r. It will be also included in backups of the system configuration.

A.7 VERSIONS RELEASED IN 2006 (64)

1.19.1.1 (Dec/27/2006)

- Bug(s) fixed:
  - A bug related to version '1.19.1.0' and 'midas.dll' was fixed: the content of this dll was compiled inside the binary code to avoid its redistribution.

1.19.1.0 (Dec/26/2006)

- Parts of the source code were optimized.
- The DBase database (RCard and RTip) was upgraded to the native XML engine provided by Borland. It is very small, stable and fast.
  - Therefore, do not restore the database from old versions to the new ones.
  - It will be easier to integrate `R` and Tinn-R in the future.

1.19.0.18 (Dec/13/2006)

- The *Print* resource was a bit reworked: it will always close the print dialogue after pressing the *Print* option.
- The *Application options* was a bit reworked.
- Two non-configurable shortcuts were added:
  1. `CTRL + (`: insert (or replace) (|)
  2. `CTRL + )`: insert (or replace) ()
- A new folder named *custom* was added to the program folders. It contains two customizable files: `Rcompletion.r` and `Rconfigure.r`:
  1. `Rcompletion.r`: allows the user to customize the new *auto completion* resource (described below);
  2. `Rconfigure.r`: allows the user to customize the `R` configuration.
- The first approach of *auto completion* was implemented and the default keystroke is `CTRL + J`, but the user can customize it in the *Editor* options: *Options/Main/Editor/Keystrokes*. Use it, after any valid word, by pressing the keystroke. For example:

```
if<CTRL + J> to obtain:
if (| < )

ifc<CTRL + J> to obtain:
if (| < ) {

}

fo<CTRL + J> to obtain:
for (i in 1:i|)


foc<CTRL + J> to obtain:
for (i in 1:|) {

}

sw<CTRL + J> to obtain:
switch(|,
a = ' ',
b = ' ',
)

wh<CTRL + J> to obtain:
i = 0
while (i < |) {

  i = i + 1
}

eq<CTRL + J> to obtain:
\begin{equation}\label{eq_01}
  |
\end{equation}
```

Observations:

1. Only two letters were used to define simple structures (for example: *fo* = *for*, *fu* = textitfunction);
2. Considering the above, letter c was added to complete or more complex structures (for example: *foc*, *fuc*);
3. If there are no conflict among the names in the *Rcompletion file*, the first letter is enough. For example: *s* = *swc*. If there are conflicts, it will be necessary to add more letters to complete the diferentiation;
4. The | symbol is used to define where the cursor will first stop after the auto completion;

5. To better understand it, have a look at the file `Rcompletion.r` within the folder *custom* where the program was installed and do your own tests.

1.19.0.17 (Dec/10/2006)

- Bug(s) fixed:
  - When both options *Organize screen* and *Return focus* were marked, it triggered a bug, which has been fixed.

1.19.0.16 (Dec/08/2006)

- The *Main menu* was reworked and several options now have a better logic place.

1.19.0.15 (Dec/07/2006)

- The *Main menu* was reworked and several options now have a better logic place.

1.19.0.14 (Dec/06/2006)

- The interfaces *Search text* and *Replace text* were reworked.
- Parts of the source code were optimized.
- It is now possible to increase and decrease (non-permanent) the font size of any individual file easily:

```
<SHIFT + CTRL + +> (plus  (+) on the numeric keypad): INCREASE (upper limit is 50)
<SHIFT + CTRL + -> (minus (-) on the numeric keypad): DECREASE (lower limit is  1)
```

1.19.0.13 (Dec/04/2006)

- All images of the documentation were updated to the latest version.

1.19.0.12 (Dec/04/2006)

- Parts of the source code were optimized.
- The way as the opened files are closed was enhanced. Now, if any file was changed and the user chooses *Cancel*, the current procedure will be canceled too. For example, closing: projects, all right, all left, etc.

1.19.0.11 (Nov/30/2006)

- The *Application options* was a bit reworked. Now the user can set the initialization parameters of Rgui. Set it at *Application options/R/General/Rgui (Parameters and path)*.

1.19.0.10 (Nov/30/2006)

- The *Project* interface was a bit enhanced.
- Parts of the source code were optimized.

1.19.0.9 (Nov/29/2006)

- Bug(s) fixed:
  - A bug related to the *Project* and associated with the prior version of Tinn-R (1.19.0.8) was fixed.

1.19.0.8 (Nov/28/2006)

- The pop-up menus related to the *Project*, and to the *Editor*, were a bit reworked with respect to *Put full path in the clipboard* option.
- Parts of the source code were optimized.
- *Search text* and *Replace text* interface were reworked.

1.19.0.7 (Nov/27/2006)

- If the variable *rGuiPreferred* is empty (as in the first use) in the *ini file*, Tinn-R will check in the Windows registry at *HKLM\R-core\R* to find the path where Rgui.exe was installed. So, if the user want to use `Tinn-R with R console`, it is no longer necessary to set it in the *Application options*.

1.19.0.6 (Nov/23/2006)

- The command *Send line* to `R` was enhanced. Now, whenever the user set it not to send comment lines, and the current line is either commented or empty, Tinn-R will search below towards the end of file, for the first not commented or empty line and will send it automatically. Also, it will always search below towards the end of the file, for the first not commented or empty line. So, the user's work when sending line by line will be reduced.

1.19.0.5 (Nov/21/2006)

- The *Application options* was a bit reworked. Now the user can decide whether the position of the Tinn-R and Rgui windows will be organized automatically or not, when Rgui is running. Set it at *Application options/R/Organize*.

1.19.0.4 (Nov/18/2006)

- Bug(s) fixed:
  - A bug associated with the use of `CTRL +` to insert content of the tip with 'R complex' and another was fixed.

1.19.0.3 (Nov/17/2006)

- Now Tinn-R has four multi-highlighters: *HTML complex*, *PHP complex*, *R complex* and *Sweave*:

```
1. HTML complex = HTML & JavaScript
2. PHP complex = HTML & JavaScript & PHP
3. R complex  = R & URI ('<<<' begin URI '>>>'   end URI)
4. Sweave = TeX & R ('>>=' begin R '@' end R)

URI : Uniform Resource Identifiers.
R: complex: The main syntax is R, '<<<' and '>>>' the tags enable the user
to insert a block of URI syntax.
Sweave: The main syntax is TeX, '>>=' and '@' the tags enable the user
to insert a block of R syntax.



The SynHighlighterURI unit implements an URI syntax highlighter for SynEdit.

Recognition of URIs is based on the information provided in the document
"Uniform Resource Identifiers (URI): Generic Syntax" of "The Internet Society",
that can be found at http://www.ietf.org/rfc/rfc2396.txt.

Also interesting is http://www.freesoft.org/CIE/RFC/1738/33.htm which describes
general URL syntax and major protocols.

These protocols are recognized:
------------------------------
http://
https://
ftp://
mailto:
news: or news://
nntp://
telnet://
gopher://
prospero://
wais://
```

```
As well as commonly used shorthands:
------------------------------------
someone@somewhere.org
www.host.org
```

Example of R complex:

```
# <<< http://www.r-project.org/ >>>
# <<< joseclaudio.faria@terra.com.br >>>
# <<< phgrosjean@sciviews.org >>>

mean(rnorm(100))
```

or

```
# <<< http://www.r-project.org/
#     joseclaudio.faria@terra.com.br
#     phgrosjean@sciviews.org >>>

mean(rnorm(100))
```

Therefore, by pressing CTRL and right button of the mouse on any valid link, it is possible to follow the link (browser, client of email, etc).

- Menu *Options* was a bit reworked to enable the user to set *R* or *R complex* as the default syntax.

1.19.0.2 (Nov/09/2006)

- The option `Automatically configure R (Rprofile.site)` was enhanced. Now the user can now decide whether the changes will be `temporary` (on the current session only) or `permanent` (editing automatically the Rprofile.site file). For both, if necessary, the user can edit (customize) the file *Rconfigure.r* in the folder *doc/English* where Tinn-R is installed. So we think this new resource is now more powerful and flexible.

- The *Application options* was reworked. Now it is possible to set the position of the Tinn-R window (top, bottom, left or right with respect to the Rgui). `Left or right positions are recommended only for very large screens`. Set it at *Application options/R/Organize*.

1.19.0.1 (Nov/07/2006)

- One new option `Automatically configure R (Rprofile.site)` was added to the *R* main menu. It will enable the user to automatically configure the Rprofile.site file with all packages which are necessary to work efficiently. If any of those are not found, `R` will download and install them when starting.

1.19.0.0 (Nov/06/2006)

- Bug(s) fixed:
  - Bugs when opening files in Tinn-R by double clicking from *Windows Explorer* were fixed. In other words, the interaction with *Windows Explorer* was enhanced.
  - A bug associated with `SHIFT+ESPACE` was fixed.
- Tinn-R has now a new logo/image identity which reflects its natural evolution.
- The sources codes were deeply remade and optimized.

1.18.7.3 (Oct/30/2006)

- Bug(s) fixed:
  - A small bug was fixed: from now on, whenever the user starts `R` inside `Tinn-R`, it will open automatically in the `SDI mode`, otherwise, in the default mode defined in the *Rconsole* configuration file. Also, if any file happens to be open, `and active`, the `R Working Directory` will be set to its path. Otherwise, it will be set to the default path (../bin) where `R` was installed.
  - Bugs with TCP/IP protocol (associated with the prior version 1.18.7.2) were fixed: sorry for this. By the way, we would like to remember the users there are still some unsolved problems with *R output* under this protocol. For example, the codes below:

```
f <- function(x)
  x/10 + 1
```

or, i.e, `any instruction with more than one single line`,

```
a <- 0
for (i in 1:20) {
  a = i
  if(a <= 5 ) {
```

```
    cat('a = ', a, '(<= 5)'); cat('\n')
    next
  }
  if(a == 18) {
    cat('a = ', a, '(= 18)'); cat('\n')
    break
  }
}
```

will always generate errors. We've been working hard in order to solve it, but it is not easy! Moreover, consider that this protocol's main objective is to be used with R explorer interface and `any other use is still experimental`.

1.18.7.2 (Oct/30/2006)

- Bug(s) fixed:
  - A small bug, when closing the *Rgui* and the choice of *Cancel*, was fixed.
- The *Application options* was reworked a little bit. The options enabling the user to set Tinn-R to always show *Tips* and *Completion* were removed. We think it was an annoyance. Now, the triggers can be used to do that.
- One new function was added both in the *R toolbar* and the *R* menu: *Toogle start/close*. It will enable the user to start/close the preferred user *Rgui*.
- From now on, whenever the user starts R inside `Tinn-R`, it will open automatically in the `SDI mode`, otherwise, in the default mode defined in the *Rconsole* configuration file. Also, if there is any opened file, the `R Working Directory` will be set to its path. Otherwise, it will be set to the default path (../bin) where R was installed.
- Several parts of the source code were optimized.
- The performance of the communication with the *R server* (under all protocols) was enhanced. Now the user can to try to set the delay for computational synchronization (*Options/Main/Application/R/R server*) to small values (50, 80 or 100 ms, in harmony with the hardware). We recommend testing different delays until a good performance is obtained.
- Icons of *Controlling R* were remade.

1.18.7.1 (Oct/26/2006)

- Many cosmetic changes were made to the program's interface and documentation.

1.18.7.0 (Oct/25/2006)

- All the HTML documentation of Tinn-R was easily remade; we became very tired of the *blue colour*: txt2tags is an exceptional tool!
- From now on (Enio Jelihovschi - a new Tinn-R member) is responsible for the production and quality of all Tinn-R documentation. Welcome Enio, we wish you have a good work on board.
- One new function was added both to the R toolbar and the R menu: *TCP/IP toggle connetion*.

1.18.6.13 (Oct/24/2006)

- Parts of the source code were optimized.
- *Tools/Sort* was enhanced: it now enables you to sort by *Strings*, *Numbers* and *Dates*.
- Popup menu associated with tabs was a bit reworked.
- The speller now will advise whenever it finishes the corrections.

1.18.6.12 (Oct/22/2006)

- Several parts of the source code were optimized.
- Popup menu associated with the *Tabs* was enhanced. It now additionally enables you to close all files located at the `right` or `left` from the active tab.
- Main menu *File* was a bit remade.
- *Popup menu editor* was a bit remade.

1.18.6.11 (Oct/20/2006)

- Bug(s) fixed:
  - A small bug associated with main menu, *Tools* was fixed.

1.18.6.10 (Oct/20/2006)

- Several parts of the source code were optimized.

- R explorer performance was enhanced. Now you can to try to set the delay for computational synchronization (*Options/Main/Application/R/R server*) to small values (50, 80 or 100 ms, in harmony with your hardware). We recommend testing different delays until you obtain a good performance.

- We also recommend you to use the resources of *R explorer* under TCP/IP protocol (it makes the Rgui console cleaner). By the way, there are still some unsolved problems with *R output* under this protocol.

- Window *About* was remade.

1.18.6.9 (Oct/17/2006)

- Bug(s) fixed:

  - A small bug associated with CTRL + W shortcut closing two files instead of just one, was fixed.

- The *Application options* was somehow reworked. When closing it, the screen will not be organized. Therefore it will be necessary to toggle it on the main menu *View/Organise screen* or in the toolbar *Tools*.

- The options *Send selection* will be enabled only if any selection was done.

1.18.6.8 (Oct/10/2006)

- Bug(s) fixed:

  - A small bug associated with *Status bar* was fixed.

- The *Application options* was reworked. It is now possible to set the position of R (top or bottom) on *Organize screen* resource by using *Application options/R/General/settings*.

- Clipboard actions were enhanced.

1.18.6.7 (Oct/08/2006)

- A new option *Organize screen* was added to the menu *View* and the button associated to it was added to the bar *Tools*. This has been, up to now, an old user's request, and it enables you to put, in a fast way, the `R Console on the top` of the screen and the `Tinn-R on the bottom`.
- *Tools/Sort* was enhanced: now it maintains the file in the original *Top line* position.
- The way project files (*.tps) are opened was changed: the textual file (by default) will not be opened anymore. The user, now, can easily edit the file in the *Project* interface.

1.18.6.6 (Oct/06/2006)

- A new option *Sort* was added to menu *Tools*. This enables the user to sort an entire file (any selection mode) or selection (for while only for *smNormal* and *smColumn*).
- *Popup menu editor* was reworked.
- Icons of *R explorer* were changed.

1.18.6.5 (Oct/03/2006)

- Bug(s) fixed:
  - A bug related to *Spell*, that always broke down when finding < or <- symbol, was fixed. The origin of this bug was a component conflict (hard coded) among the HTML brackets, declared as below:
  - A bug associated to *Project/Close entire project* was fixed.

```
const
OpenBracket: array[THTMLBracket] of PChar=('<', '<!--', '<%');
CloseBracket: array[THTMLBracket] of PChar=('>', '-->', '%>');
```

and the R assign symbols:

```
<-
<<-
->
->>
```

Therefore, if any file has HTML syntax (with any of those tags above) all text among the declared brackets is free of speller. We believe that will work nicely from now on.

1.18.6.4 (Oct/01/2006)

- The *Shortcuts customization* interface was reworked.

1.18.6.3 (Sep/29/2006)

- The *Shortcuts customization* interface was remade, we think it is now more user friendly.
- There is a new button in the interface above, that enables the user to restore the main default Tinn-R shortcuts.

1.18.6.2 (Sep/28/2006)

- Bug(s) fixed:
  - A small bug associated with the buttons icons of *Tools/R explorer* related with version 1.18.6.1 was fixed.

1.18.6.1 (Sep/28/2006)

- Version 1.18.6.0 was updated, due to some problems detected in file *default.bin*. Accordingly, we `strongly recommended` that, before using this new version, the user `manually` removes that file. In order to help the user in finding out where Tinn-R stores all the `ini files`, a new option was added to the main menu *Tools* named *Ini files*. The *default.bin* file is located in the sub-folder *shortcuts*. Therefore, go to the folder and delete it. Sorry for the inconvenience.

1.18.6.0 (Sep/26/2006)

- Several parts of the source code were optimized.
- Menu and pop-up menu options were remade and some icons replaced/changed.
- A new option *Shortcuts customization* was added to the menu *Options*. This will enable the user to manage (edit, load and save) all actions of Tinn-R interface. The latest in use will be always reloaded when restarting the program.

1.18.5.12 (Sep/15/2006)

- Bug(s) fixed:
  - A few small bugs pointed out by users were fixed.

1.18.5.12 (Sep/13/2006)

- Bug(s) fixed:
  - A small bug, which has been happening whenever the user opens the first file located in the floppy drive and access this floppy in subsequent files, was fixed.

1.18.5.11 (Sep/12/2006)

- Bug(s) fixed:
  - A small bug, related to versions 1.18.5.9 and 1.18.5.10, associated with menu *File/Save as*, was fixed.

1.18.5.10 (Sep/11/2006)

- The command *Send line* to `R` was enhanced. Now, whenever the user sets it not to send comment lines, and the current is either commented or empty, Tinn-R will search below to the end of file, for the first not commented or empty line.

1.18.5.9 (Sep/10/2006)

- Bug(s) fixed:
  - A small bug associated with dragging files in project interface was fixed. Before, whenever you changed files among groups it would not be associated with changes.
- One new function was added both to the `R` toolbar and the `R` menu: *Set work directory (current file path)*.
- The icons associated with *Computer* interface (*Add* and *Remove* favorite folder) were replaced.
- Tinn-R now recognizes all valid extensions for any syntax when saving files. For example, the new valid `R` extensions are: *.r, *.Rhistory, *.q, *.s and *.ssc; so, whenever you type:
  - `Myfile` - it will be saved as `Myfile.r` (the first extension is the default);
  - `Myfile.R` - it will be saved as `Myfile.R` (`R` is a valid extension and Tinn-R is now case insensitive for that purpose);
  - `Myfile.Rhistory` - it will be saved as `Myfile.Rhistory` (Rhistory is a valid extension);

  - `Myfile.help` - it will be saved as `Myfile.help.r` (`help` it is not a valid extension and *.r is the default);
  - PS: in order to save any file with any extension, you must choose *All* syntax.

- Whenever the *tab file* has the focus, a new associated pop-up menu is available with the following options: *Close*, *Close others* and *Close all*.

- The way Tinn-R opens and closes a project, was changed. Now, any *.tps (from any source) will also be opened in the *Project* interface and all files of the project will be closed only and only if you choose the option *Close entire project*.

- The *Project* interface was isomehow enhanced. Now, the user can type `DELETE` to delete either groups or files, `INSERT` to add files to selected groups and <**CTRL + INSERT**> to add the current file to the selected group.

1.18.5.8 (Ago/03/2006)

- Tinn-R version 1.18.5.7 was pre-released (restricted to developers only).

- The conflict between the *Editor option/Alt sets column mode* and the possible user option *Format/Selection mode/Column* was fixed.

1.18.5.7 (Ago/01/2006)

- A first approximation to build a speller in Tinn-R was made.

- To install this new resource do the following:

  1. Close Tinn-R;
  2. Download the dictionaries http://www.luziusschneider.com/Speller/English/index.htm that you want and install it from the installer (for example ISpEnFrGe.exe).

- It is very simple, works nice, has power and all resources are open-source.

- For a while this component did not recognize the main SynEdit component used for edition. Consequently, it was necessary to do the spelling in two steps, making the correction in a new page (*Spell*) on *Results* interface.

- `Whenever it finds any selection`, the correction will be made only for it, as well as for subsequent updates (or for subsequent update).
- The basic edition resources of the *Spell* are available in a pop-up menu.
- In the meanwhile, please consider this new resource as `still experimental` and under development.

1.18.5.6 (Jun/24/2006)

- The highlighters *All* and *Text* were remade.

1.18.5.5 (May/29/2006)

- *Save* and *Save as* were remade. Thank you `John` for the good suggestion.
- The user can change the selection mode by clicking the mouse anywhere in the *Main status bar*. The order of the changes is sensitive to:
  - `Left` - corresponds to the menu *Format/Selection mode* `bottom to top order`;
  - `Right` - correspond to `top to bottom order`.
- Tinn-R now recognizes the RGUI JGR. In the meanwhile, please consider it as `still experimental`.

1.18.5.4 (May/28/2006)

- Bug(s) fixed:
  - Small bugs (detected in version 1.18.5.3) were fixed.

1.18.5.3 (May/27/2006)

- Bug(s) fixed:
  - Small bugs (detected in prior versions) were fixed:

    Open *PDF* files;
    Appearance of the panel *Results*;
    Icons association from the pop-up menu *RCard*.
- Small changes were made to the icons.
- A single click mouse in the editor gutter now selects the entire line.

- Window *About* was reworked.
- Window *Credits* (previously called *Information*) was updated to reflect the lastest changes.
- The echo of the instructions sent to `R` interpreter (visible in *R output* window) is now optional in Tinn-R. In order to set it up, you can mark/unmark the option *R output echo on* in *Options/Main/Application/R/General/Settings*. If it is marked the `R` output window will show the instructions (not for all options of *send to R*) and the `R` output. Please, remember that all these resources are `still experimental` and not too interactive.

1.18.5.2 (May/22/2006)

- Bug(s) fixed:
  - Small icon changes and bugs corrections.

1.18.5.1 (May/20/2006)

- Bug(s) fixed:
  - A small bug related with *reload* was fixed. Many thanks to `Michael Prager` for pointing this out to us.
  - A couple of small bugs (pointed out by users) were fixed.
- Tinn-R versions 1.18.4.6 and 1.18.5.0 were considered pre-released (restricted to developers only).
- All icons were changed. Thanks to `Philippe` for the hard work of its selection and organization. We hope you like this new look.
- All syntax are now alphabetically ordered.
- Whenever the user chooses *Save* or *Save as* Tinn-R will to try to recognize the active syntax and the related file extension.
- The images of the files *ReadMe.html*, *LizesMoi.html*, *LeiaMe.html* and *LeaMe.html* were changed so that they reflect the latest changes.
- Several parts of the source code were optimized.
- *Editor options* interface was a bit reworked.
- The *Search in files* and *R output* interface were reworked.
- Menu *R* was a bit reworked.

- Now, the user can choose which R resources, related to *Send to R* and *Controlling R*, will be visible. To do that, two options are available: *Application options/R/R menu and toolbar* and a pop-up menu associated to R toolbar.

1.18.4.5 (Apr/07/2006)

- The recommendation that, under Windows XP, the user should configure the appearance of windows and buttons to `Classic style of Windows` (`not for XP style`) is no longer used. In other words, the old conflict among the XPMenu component that Tinn-R uses and Windows the XP skins was fixed.

1.18.4.4 (Apr/02/2006)

- The menu *Help* was reworked and new options were added to it. The basic idea is to show how the HTML files are created by using the tool converter `txt2tags` and, the most important, it now enables the users `to help us with the constructions and corrections of these files`. So, sorry for any language mistake, but my native language (JosÃ© ClÃ¡udio Faria) is not English and I don't want to annoy anyone, anymore, with English corrections. If possible, please help us, because these documents could be useful to many other users.

- Tool *Computer* has now two new buttons that enables the user to add and remove favorite folders.

- Application options interface was reworked. Now it enables user to set how the DOS console will be shown for compilation.

- As a consequence, the *Tools* menu and *Processing* toolbar also have the related options.

- For both file compilation ('.tex' to '.dvi') or ('.tex' to '.pdf') whenever the *Open always after compilation (option)* `is marked`, Tinn-R will freeze while waiting for the MikTeX compilation to open the compiled file, in the other way it will not. In another words, whenever the *Open always after compilation (option)* `isn't checked` Tinn-R will not freeze and the user can continue normally his job.

- Tinn-R now is closed with `//Yap (Yet Another Previewer)// as DVI viewer`, because it is the default released with MikTeX distribution, and it is a very nice and fast DVI viewer. Tinn-R will open only a single instance of the Yap, but allowing as many files as the user whishes.

- If the user uses the function *utils:::setWindowTitle(paste("-",getwd()))* in Rprofile.site, Tinn-R still recognizes Rgui in SDI mode (it was not the case in previous versions between 1.18.X.X and 1.18.4.3).

1.18.4.3 (Mar/28/2006)

- Tinn-R versions 1.18.3.1, 1.18.3.2, 1.18.4.0, 1.18.4.1 and 1.18.4.2 were considered pre-released (restricted to developers only).
- The structure of the Tinn-R ini files was changed again:

```
..\Tinn-R                : ReadMe.txt file;
..\Tinn-R\data           : dbRcard.dbf, dbRcard.dbt, dbRCard.ndx, dbRtip.dbf,
dbRtip.dbt, dbRTip.ndx and ReadMe.txt files;
..\Tinn-R\ini            : Shortcuts.tinn, Tinn.ini and ReadMe.txt
..\Tinn-R\ini\colors     : customColors.ini and ReadMe.txt
..\Tinn-R\ini\syntax     : C#.ini, C++.ini, ... , XML.ini and ReadMe.txt;
..\Tinn-R\ini\syntax bkp : temporary syntax file and ReadMe.txt;
..\Tinn-R\syntax         : deplate.xml, txt2tags.xml and ReadMe.txt.
..\Tinn-R\temp           : temporary files.
```

So, the old backups will not be compatible anymore with this and future versions. This version will recognize the basic old system configurations, but not all syntax preferences. Sorry for the inconvenience, but, it was necessary. From now on, Tinn-R will make real system (all ini files) backup of your settings and preferences.

- Two useful tools for file conversion were added: deplate and txt2tags. For deplate, the extension `.dlpt` was proposed, and for txt2tags Tinn-R recognizes `.t2t`. The basic highlighters, based on XML, were proposed for both. `We hope users can help us in the development`. Also, the interface for syntax colors preferences for both are different from the already known Tinn-R interface. So, please consider that it is working nicely, but that it will be temporary.
- Tinn-R now enables you to compile `LaTeX` files with MikTeX and view the `DVI` and `PDF` results (Yap and Acrobat) and also to see `HTML` files in your preferred browser starting from Tinn-R.
- Application options interface was reworked. It now enables you to set the basic preferences for file conversion, file compilation and viewers.
- As a consequence the *Tools* menu and toolbar have new options to file conversion, compilations and file view.
- All help files were changed from '.txt' to '.html' using the new txt2tags tool inside Tinn-R: we hope you like the new resources.

- Several parts of the source code were optimized.
- Menu *Web* was reworked.
- Menu *Help* was reworked.

1.18.3.0 (Mar/16/2006)

- The structure of the Tinn-R ini files was changed:

```
..\Tinn-R                : ReadMe.txt file;
..\Tinn-R\data           : dbRcard.dbf, dbRcard.dbt, dbRCard.ndx, dbRtip.dbf,
dbRtip.dbt, dbRTip.ndx and ReadMe.txt files;
..\Tinn-R\ini            : Shortcuts.tinn, Tinn.ini and ReadMe.txt
..\Tinn-R\ini\colors     : customColors.ini and ReadMe.txt
..\Tinn-R\ini\syntax     : C#.ini, C++.ini, ... , XML.ini and ReadMe.txt;
..\Tinn-R\ini\syntax bkp : temporary syntax file and ReadMe.txt;
..\Tinn-R\temp           : temporary files.
```

Therefore, old backups will not be compatible with this and next versions anymore. This version will recognizes the basic old system configurations, but not the syntax preferences. Sorry for the inconvenience, but they were necessary. From now on, Tinn-R will make real system (all ini files) backup of your settings and preferences.

- *Syntax color preferences* interface was reworked and it has new options.
- Tinn-R has three multi-highlighters: Sweave, HTMLcomplex and PHPcomplex:
  1. Sweave = TeX & R
  2. HTML complex = HTML & JavaScript
  3. PHP complex = HTML & JavaScript & PHP

These highlighters have no priorities when you set the syntax color preferences. Thus, if you change the color preferences of any of these multi-highlighters (Sweave, HTML complex and PHP complex) these settings will be valid only in the current Tinn-R session and will not be saved when Tinn-R is closed. So, if you want to make permanent changes, set the preferences from all simple highlighters (R, TeX, HTML, JavaScript and PHP).

- Menu *Option/Syntax* was reworked.
- A lot of the source code was optimized.
- All Tinn-R color dialogs were reworked and they automatically save and recover all preferred colors.

1.18.2.1 (Mar/08/2006)

- Some aspects of *Syntax color preferences* interface were optimized.
- *Replace text* and *Search text* interface now recognize if more than one text line was selected and set the option *Selected text only* automatically.

1.18.2.0 (Mar/06/2006)

- Now Tinn-R has three multi-highlighters: Sweave, HTMLcomplex and PHPcomplex:

  1. Sweave = TeX & R
  2. HTMLcomplex = HTML & JavaScript
  3. PHPcomplex = HTML & JavaScript & PHP

  These highlighters have no priorities when you set the syntax color preferences. Thus, if you change color preferences of any of these simple highlighters (Sweave, HTMLcomplex or PHPcomplex) these settings will be valid only in the current Tinn-R session and will not be saved when Tinn-R is closed. So, if you want to make permanent changes, set the preferences of all these simple highlighters (TeX, R, HTML, JavaScript and PHP) from the multi-highlighters (Sweave, HTMLcomplex and PHPcomplex) respectively.

- Several parts of the source code were optimized.
- *Tools/Project* interface was reworked; now it has new resources.

1.18.1.10 (Feb/18/2006)

- Bug(s) fixed:
  - A small bug with Sweave highlighter related to color preferences was fixed. In fact, Sweave highlighter is a multi-highlighter made from prior R and TeX highlighters. So, if you set the color of the background to all TeX elements (comment, space, etc) with the same color (gray for example), you can get the Sweave syntax with two background colors: one for TeX (gray) and another to R (white).
  - A small bug with *View/Line numbers* was fixed.

1.18.1.9 (Feb/18/2006)

- Bug(s) fixed:
  - A small bug with menu *Edit/Undo* and *Edit/Redo* was fixed. Many thanks to users for pointing this out.

  - A small bug with menu *Edit/Undo* and *Edit/Redo* was fixed. Many thanks to users for pointing this out.

- Sweave syntax highlighter was added to Tinn-R with .rnw and .snw extensions. For Tinn-R the delimiters are:

```
>>=  start a R block
@    close it.
```

- Sweave provides a flexible framework for mixing text and S code for automatic document generation. A single source file contains both documentation text and S code, which are then woven into a final document containing:

  1. The documentation text together with
  2. The S code and/or
  3. The output of the code (text, graphs) by running the S code through an S engine like R.

  Hence, the full power of LaTeX (for high-quality typesetting) and S (for data analysis) can be used simultaneously. For more information see `?Sweave` from R.

- All combo-box related with files and extensions were reworked and now they are simpler.

1.18.1.8 (Feb/12/2006)

- Bug(s) fixed:
  - Small bug with *Copy* of pop-up menu *R card* was fixed.
  - A couple of small bugs (pointed out by users) were fixed.
- Main menu *Help* and *Web* were reworked.
- Tinn-R and SciViews-R GUI performance was enhanced.
- Small correction with *R explorer* interface related to enabled/disabled options.
- Two new options were added to menus *R* and *R toolbar*: *Edit* and *Fix*. These options enable you to edit or to fix R objects (if they exist in the R environment).

1.18.1.7 (Jan/14/2006)

- Small correction with *R card* and *R explorer* interface related to enabled/disabled options.

1.18.1.6 (Jan/10/2006)

- Bug(s) fixed:
  - Small bugs pointed out by users were fixed. Many thanks users!
- A new option *GUI Wiki* was added to menu *Web/R-information on line*. This Wiki was designed mainly to deal with R beginners problems. Although we would like to emphasize the use R GUIs (Graphical User Interfaces), this Wiki is not restricted to those GUIs: one can also deal with command-line approaches. Thus, the main idea is to have material contributed by both beginners, and by more advanced R users, that will help novices or casual R users.
- In menus *R* and *R toolbar* the position of the buttons was a little changed for a more logical arrangement; additionally, some icons were changed and a new and very useful option was added: *Example*.
- Print/preview, R explorer and R card Interfaces were reworked.
- Under TCP/IP some functions to *Controlling R* were reworked, which are now more user friendly.
- Horizontal and vertical splits were deeply reworked. Now they are more user friendly. In consequence, the main menu *View* was changed.
- The pop-up menu of the open files was enhanced and two new options were added: *Close all* and *Close others*. The *Close others* was also added to the Main menu *File*. The first enables you to close all files and the second, all files except the active (current) one. Please note that both will be enabled only if two or more files are open.
- A lot of procedures and functions were optimized.

1.18.1.5 (Jan/01/2006)

- A Tinn-R card, *Help/Tinn-R card (PDF)*, was added to the project. Many thanks to `Suresh Krishna`.
- New interface/options for printing, which now enables you to print preview with new resources. In consequence, menu *File/Print preview* was removed.

A.8 VERSIONS RELEASED IN 2005 (25)

1.18.1.4 (Dec/24/2005)

- The extensions '*.s' and '*.ssc' were added to R syntax.
- New interface/options for printing, which now enables you to choose the file's printing range: All, Selection and Pages.

1.18.1.3 (Dec/17/2005)

- The changes (since Tinn-R 1.17.2.6) have been considered stabilized.
- A new option *R syntax as default* was added to the main options and menu *Options*. It enables you to choose if a new file and file without extension will be opened for edition with *R* or *General* syntax as default.

1.18.1.2 beta (Dec/11/2005)

- Tinn-R version 1.18.1.1 BETA was considered pre-released (restricted to beta testers only). Many thanks to all testers.
- The pop-up menu of the *R explorer* was enhanced and new options were added.
- You can now drag and drop objects from the *R explorer* to editor.
- Many procedures and functions were optimized.

1.18.1.1 beta (Dec/03/2005)

- Bug(s) fixed:
  - A small bug with the install program (related to desktop shortcut creation) was fixed. The old shortcut was pointing to *Tinn-R.exe.manifest* file and not to *Tinn-R.exe*.
- An experimental R explorer was added to the program. This was accomplished by adding a new tab named *R explorer* to the panel *Tools*; it enables you to see R objects from Tinn-R. Meanwhile, this explorer must be updated by the user because it is not automatically done by the R server. It was based on the SciViews R explorer, but it is not exactly the same.
- The speed of the procedures/updates with the panel *Tools*: *Computer* and *Project*, were enhanced.

- A new option *Send to R* was added to the pop-up menu of *Project*. It enables you to send the whole project, individual groups or individual files to the server without opening it for edition.
- A new menu option was added to the *R* menu: *Server: connections and tests*. This menu will open a new window of the program that allows you to connect and test R as server using TCP/IP and DDE protocol.
  - The window *Application options* was somehow reworked to reflect the new features of the program (specially TCP/IP protocol to communicate with R server). This resource is still experimental and, under tests, it shows instability. So, if any problem occurs, disconnect the server *Server: connections and tests* and all new resources (using another option - DDE and/or temporary files) will work. In the future the use of TCP/IP protocol by Tinn-R will be enhanced.
- An experimental code completion was added. For a basic use:
  1. Set the options on *Application options*;
  2. Like *Tip*, if you check *Always shown*, after the data object type and '$' related completion will be shown;
  3. Select the desired completion and press ENTER to make it work.

```
A tip: my preferred shortcuts are: ``CTRL + D`` for tip after //(//
and ``CTRL + SHIFT + D`` after '$' for code completion.
```

- A new menu option was added to the *View* menu: *R output*. This menu will open a new window on the bottom of the program that allows you to receive the output of the R as server using only TCP/IP protocol. It is still experimental.
- The communication with R under DDE protocol was enhanced: it is now faster and more stable.
- Tool *Computer* now allows you to open (with double click or drag and drop) any type of files, and no only the ones recognized.
- Two new syntax highlighters were added to Tinn-R:
  1. Fortran: useful to R developers;
  2. Visual basic: still lives.
- A new pop-up menu was added to the list view of Tools *Computer* that enables you to refresh and to choose the view style.
- Many procedures and functions were optimized.

1.17.2.6 (Oct/27/2005)

- Bug(s) fixed:
  - A small bug related to *On top* was checked and Tinn-R sometimes minimizes and others times it doesn't (hides in the taskbar), was fixed. Many thanks to `Mihai Nica` for pointing that out.

1.17.2.5 (Oct/25/2005)

- The memory use increases (16 k every second) related to some prior versions was fixed. Many thanks to users for pointing this out.
- The SynEdit.pas unit component was updated to the latest version 1.428 2005/10/07 21:16:10. So, gutter width was always calculated using editor font was fixed.
- Shortcut for *Format/Block/Mark* was changed from `CTRL + ALT + B` to `CTRL + ALT + S`.

1.17.2.4 (Oct/08/2005)

- Bug(s) fixed:
  - A small bug with *Options/Syntax/Color preferences* related to *Cancel* option was fixed.
- The *TeX highlighter* was a little reworked: now it matches brackets. Thanks `Sheldon Kelly` for suggest it.
- The *Restore* procedure was a little changed: it now checks if any file or project was changed (and not saved) prior to restart the program.
- The database was a little reworked. So, if you had any old Tinn-R version installed, we recommend that you restore the data from this version. To do this, select *Tools/Restore/Database* from the main menu and choose the *data* folder where Tinn-R was just installed, as a prior backup.
- Main program icon was a little changed (the `R` is now darker).

1.17.2.3 (Oct/03/2005)

- Bug(s) fixed:
  - A small bug with database (related with version 1.17.2.2 only) was fixed.

1.17.2.2 (Oct/02/2005)

- Bug(s) fixed:
  - A bug with messages below:

```
"Severe problem! The program cannot be initiated. Please, contact the
developers."

"Access violation at address 'hexa number' in module 'Tinn-R'. Read address
'hexa number'."

It was now fixed. This bug was related to more than one file were selected
from the explorer to be opened and Tinn-R was not running.
So, if Tinn-R is not running (if and only if), avoid to make it because it
will open one instance of Tinn-R and one file (the first in alphabetic
order) only. BTW, if Tinn-R is running, you can select simultaneously any
desired number of files.
```

  - A small bug when you did a global replace in Tinn-R, i.e., Search/Replace/OK/Yes to all, and get the following error message: Assertion failure (D:\...\SynEdit.pas, line 1460), was fixed: thanks John!

- Tinn-R versions 1.17.1.2 and 1.17.2.1 were considered pre-released (restricted to beta testers only). Many thanks to all testers.
- The picture, when opening the program, doesn't appear anymore.
- Main program icon was changed: I hope you like the new one. BTW, I got problems because some parts of the Windows showed the old icon and others the new. I spent a lot of time to find the original problem: ShellIconCache.

```
SO, IF YOU GET INCORRECT ICON DISPLAYED ON WINDOWS, AFTER INSTALLING THE NEW
VERSION OF TINN-R, PLEASE, READ THE INSTRUCTIONS BELOW:

For acceleration of the show of the icons Windows stores images in the ICON
CACHE (ShellIconCache) a hidden icon cache file in your windows directory.

Sometimes the icon of the object changes, but Windows shows the old icon
instead of the former one. To solve this problem we suggest to use the
program IconChanger (shareware available at http://www.shelllabs.com/).

If you have just installed Tinn-R with new icon but Windows has not changed
the image, the guide advises you to choose REBUILD ICON CACHE and if
it will not help then choose REMOVE ICON CACHE.

If you have chosen REBUILD the icon cache will start reconstructing at
once. If you have chosen REMOVE, you will see the warning  message.
Choose YES, and then you should restart your computer.
```

- If Tinn-R is closed when maximized, when restarted, it will open maximized but it will remember the last position when not maximized.
- A new shortcut `CTRL + ENTER` was added. When pressed, Tinn-R sends the current line (entire) to `R` interpreter and adds a line break at cursor position.
- A new toolbar with Undo and Redo was added.
- A new button was added to the *Misc toolbar* that allows you to choose how Tinn-R will behave after sending anything to `R` interpreter, if checked, the focus will return to Tinn-R.
- The function *Clear all* was updated and it is now faster. If any problem occur with different machines and OS, please, tell us.
- The menu *Web* was a little reworked and a new option is available: *Web/Tinn-R* with links to home page (sciViews), sourceforge server and check for update (from sciViews server).
- A new menu option *Help/Tinn-R citation* was added. It enables you to put the Tinn-R citation in the clipboard.
- After restoring the configurations file, Tinn-R now can close and restart itself.

1.17.1.1 (Aug/28/2005)

- Bug(s) fixed:
  - A small bug with recent files was fixed.
- Tinn-R versions 1.16.1.9 beta and 1.16.1.10 beta were considered pre-released (restricted to beta testers only): thanks to all testers.
- The SynEdit component was updated to the latest version (v2.0.1 beta).
- The windows *Application options* and *Editor options* were a little reworked.
- The main menu *File* was a little reworked.

1.16.1.8 (Aug/07/2005)

- Bug(s) fixed:
  - A small bug with restore database was fixed.

1.16.1.7 (Aug/05/2005)

- Tinn-R version 1.16.1.6 beta was considered pre-released (restricted to beta testers only): thanks to all testers.
- The *R highlighter* was a little reworked: identifiers with the minus signal '-' (ex: codes-deprecated) will not be recognized, any more.
- Tinn-R team has a new member working on the source code: welcome Huashan Chen.
- Tinn-R project (source and bin) is now also available from SourceForge. Thanks `Huashan`.
- The incompatibility of Tinn-R with WinNT 4.0/SP6 has been solved. Thanks `Uwe`.
- In *R toolbar* the position of the buttons was a little changed for a more logical arrangement.
- After installation, the *Tinn-R/data* folder contains data.zip (102 KB). When starting Tinn-R, the files it contains are automatically unpacked, and for each user four files are generated: dbRcard.dbf, dbRcard.dbt, dbRtip.dbf and dbRtip.dbt plus two (dbRcard.ndx and dbRtip.ndx) index files. This way, each user has an independent database.
- Also, now each user has independent configurations files.
- Considering the two topics above, Tinn-R is now multiuser. So, for instance, you can have an administrator account with full access to all files for installing programs and maintaining the machine. But for everyday work, you can log in as `main user` or `normal user` (with restricted access) and run Tinn-R without problems in those restricted environments. This feature is very useful to educational purposes in statistical laboratories.
- Only three folders are generated by Tinn-R for each user:
  - Windows XP:

    Drive:\Documents and settings\UserName\Application data\Tinn-R\ini with two files *Tinn.ini* and *Shortcuts.tinn*;

    Drive:\Documents and settings\UserName\Application data\Tinn-R\data with six database files (see above);

    Drive:\Documents and settings\UserName\Application data\Tinn-R\temp for essential temp files (will be automatically removed by Tinn-R after each session).
  - Windows NT:

    Driver:\Winnt\Profiles\UserName\Application data\Tinn-R\ini;

Driver:\Winnt\Profiles\UserName\Application data\Tinn-R\data;
Driver:\Winnt\Profiles\UserName\Application data\Tinn-R\temp.

- The database component (TDBF) was updated to the latest version.
- Menu *Tools* was reworked a little and new options were added to backup/restore your personal database and configuration files.

1.16.1.5 (Jul/15/2005)

- Bug(s) fixed:
  - A small bug with project (*Save* and *Save as*), related to automatic extension '.tps', was fixed.
- Tinn-R now works with R in MDI mode if the device graphic is maximized with no more limitations of the number of device graphic, as pointed in the Tinn-R 1.15.1.7 (07 Apr 2005).
- If you use the function *utils:::setWindowTitle(paste("-",getwd()))* in Rprofile, Tinn-R still recognizes Rgui (was not the case in previous versions).
- A new menu option (and respective button and hotkey) was added to the main menu: *R/Controlling R/List structure of selected variable* that allows you to list the structure of any R object/variable.
- A new menu (and respective pop-up menu) was added to the main menu: *File/Put full path in clipboard*. This option allows you to put the full path of the file in the clipboard with two options: Unix mode (../..) or Windows (..\..) (useful to get full path of data files).
- In *R toolbar* the position of the buttons were a little changed for a more logical arrangement.
- The menu *Format/Block* was a little reworked.

1.16.1.4 (May/29/2005)

- Bug(s) fixed:
  - Small bug with *Send marked block* was corrected.
  - Small bug with *Search* and *Search in files* were corrected.
- A new button was added to the *Misc toolbar* that allow you unmark all marks.
- Menu *Format* was reworked a little bit.

1.16.1.3 beta (May/22/2005)

- Tinn-R versions 1.15.1.8, 1.15.1.9, 1.15.1.10, 1.15.1.11, 1.16.1.1 and 1.16.1.2 were considered pre-released (restricted to beta testers only).
- The Tinn-R installer now proposes to associate Tinn-R with '.Rd' files (the R help source code).
- The menu *Format* was changed. There are now two new options:
  1. *Format/Block/Mark*;
  2. *Format/Block/Unmark*.

  The first menu allows you to select a given block of code (line start and line end) to send it at once to the R interpreter and the last menu entry allows you to clear an existing marked block. Bookmark 0 is used to mark the beggining of a marked block and bookmark 1 is used to mark its end. *Unmark* remove them only if they were marked with the *Block/Mark* tool. Otherwise, they are treated as simple bookmarks. Note that, whatever the way you defined them, you can always change their position as usual. There is a distinct marked block defined for each open file, and the tools are enabled only if a block is marked for the current active document.
- As a consequence the *R* menu and toolbar have new tools to send the marked block at once *R/Send to R/Marked block (source)* or line by line *R/Send to R/Marked block* to the R interpreter.
- Another new tool was also added to send the current selected text as a source file to R (and not line by line, as usual).
- The *Main toolbar* was a little reworked to support the new mark block option.
- The accuracy of all functions (send to, or, control R) interacting with R was enhanced.
- The stability of the databases, respect to duplication of keys, was enhanced.
- The option *Spanish* was added to the menu *Help/From this version*. It contains:
  1. Lea me.html;
  2. FAQ.txt;
  3. Palabras reconocidas.r.

  The translation was made by Jairo Cugliari: thanks Jairo, very much!

- A R card was added to the program. This was accomplished by adding a new tab named *R card* to the panel *Tools*. The R card was based on two R card already published: R/Rpad Reference Card by Tom Short and R reference card by Jonathan Baron.

  1. It was made using a user-expandable database (DBase);
  2. The component used is named TDBF, it is free (open source), does not use BDE and it is not necessary to have the database server. The DB engine code is compiled right into the Tinn-R executable. TDBF is a native data access component for Delphi, BCB, Kylix and FreePascal. More information can be found here.

- As a consequence, the *R* menu was a little reworked. You have now two options for the databases:

  1. *R/Database/Tip* for tip management;
  2. *R/Database/Card* for R card management.

- A freeware resource provided by Angus Johnson was added to the program. It is a very useful Generic Diff Format (GDIFF) named TextDiff. The GDIFF format can be used to efficiently describe the differences between two arbitrary files or folders. The format does not make any assumptions about the type or contents of the files, and thus can be used to describe the differences between text files as well as binary files. The work was made adapting the sources code of the demo project of the component to the Tinn-R project: thanks Angus, very much!

- As a consequence, the *Tools* menu has a new tool: *Tools/Differences*.

- Tinn-R is now more flexible if the screen is split: the functions *Send to R* and *Controlling R* works for both (top or below, left or right) frames.

- The *Ascii chart* is now more flexible.

- The menu *Format/Selection mode* was reworked, new and useful shortcuts were added (see in *Main/Editor/Keystrokes*): thanks Zoltan Butt.

- A new field (third field from left) was added to the status bar with three possible values corresponding to the current selection state of the editor:

  1. smNormal : selection in normal mode;
  2. smLine : selection in line mode;

3. smColumn : selection in column mode.

- The files *Tinn-R_Read me.html*, *Tinn-R_Leia me.html* (in Portuguese) and *Tinn-R_Lisez moi.html* (in French) in the *doc* subdirectory of Tinn-R were updated.
- Seven new syntax highlighters were added to Tinn-R:
  1. Rd files (based on the existing TeX highlighter);
  2. Tcl/Tk;
  3. Ruby;
  4. TeX;
  5. Python;
  6. Bat;
  7. HP48.
- The picture, when opening the program, was changed. Tinn-R program is searching for a new logo/image identity. This "tinny" (two n intentionally), but colorful bird, is a good symbol for the "tinny" Tinn-R, but rich in nice features regarding the edition of `R` code!
- The program user interface was reworked a little bit.
- Two hotkeys were changed:

```
<ALT+LEFT>  : Tools align left;
<ALT+RIGHT> : Tools align Right.
```

- The automatic extensions for all *Save* action was improved. Now, if you select *All files (*.*)* you can save the file with any desired extension or even with no extension at all. Thanks `Posta Giovanni`.
- The structure of the *Tip database* was improved. The tip is not limited to 254 characters anymore, because it is now of *memo* type.

1.15.1.7 (Apr/07/2005)

- Bug(s) fixed:
  - Minor bug with *View/Toolbars/Macro* was corrected.
- Tinn-R now works with `R` in MDI mode if the device graphic is maximized:
  1. You can work with 1..11 device graphic *ACTIVE* maximized;
  2. You can work with 1..10 device graphic *inactive* maximized.

```
The caption of \RR{} can be:
RGui - [R Graphics: Device 1..11 (ACTIVE)] or
RGui - [R Graphics: Device 1..10 (inactive)]
```

- The state of the Caps Lock key (keyboard) doesn't influence any more the *Send to R* and *Controlling R* functions.
- *Tools/Project* interface was improved with the replacement of the combo-box by a new dropdown button.
- A new toolbar named *Tools* with two buttons (*Toggle tools visible* and *Align tools right/left*) was added to the main toolbar, in consequence the pop-up *Tools* was removed.
- *Project/Recent* is now checking for changes in current project.
- The *View/Tabs* icon was changed.
- The delay for DDE communication with R (for call tips) is now user-selectable in the *Options/Main/Application* dialog box (you need to load svIDE package from SciViews bundle to use this feature). If Tinn-R seems to freeze and you got no call tip, just increase the delay.
- Menu *Web* and *Help* were a little reworked and new information in French and Portuguese were added.

1.15.1.6 beta (Mar/19/2005)

- Open files in Tinn-R with *Tools panel* was reworked:
  1. A file must have no extension or one that Tinn-R recognizes;
  2. If the file is not opened there, you can open a copy by double clicking or dragging it into the main form;
  3. With file already opened, you can now open a copy by double clicking or dragging it in the editor area in Tinn-R;
  4. You can drag a project (all files of the project will be opened), a group (all files of the group will be opened) or an individual file.
- A new pop-up menu is available for *Tools*. This menu is related with visibility and position of the *Tools panel*.
- The menu *Options* and *View* were reworked.

1.15.1.5 beta (Mar/17/2005)

- *Project* interface was a little reworked and two new options were added: *Expand all* and *Collapse all* groups.

1.15.1.4 beta pre-release (Mar/12/2005)

- *Application options* was reworked and an option *Delay for synchronization* was added. Because DDE (Dynamic Data Exchange) through tcltk and svIDE packages consumes a certain time - that is variable between different computers - this option allows the user to customize the Tinn-R delay with the R as server with call-tip. So, it is very important to adjust this delay until getting high functionality and performance.
- *Project* interface was reworked:
  1. Only the file names are showen (no more full paths);
  2. All nodes of the project can be dragged:
     a) If you drag a project all file will be opened;
     b) If you drag a group all files of this group will be opened;
     c) if you drag a single file it will be opened.
- The *Search results* interface was reworked and two old bugs (all versions of Tinn-R that I don't knew) were fixed.
- In *Tools panel/Computer* a double click on the Tinn-R project files (*.tps) will open the project interface. On the other hand, if you drag this file, the context of the project file will be opened for manual edition.

1.15.1.3 beta pre-release (Mar/06/2005)

- Changes to projects are monitored now.
- To open files in Tinn-R with *Tools panel*:
  1. A file must have no extension or one that Tinn-R recognizes;
  2. If the file is not opened there, you still can drag it into the main form;
  3. If any file is already opened, you can open a copy by double clicking or dragging it to the page control or to the main menu.
- The R highlight dictionary was updated and about 270 new functions were added to be compatible with R parameters completion proposal (RPCP) database.

1.15.1.2 beta pre-release (Mar/05/2005)

- Bug(s) fixed:
  - Small (and old) bug with painted symbols '(', '[', '{' inside the gutter was corrected: thanks `Marco`!
- A new folder named *res* with a single file (Tinn-R_img.bmp) was added to the Tinn-R program.
- The Tinn-R binary is about 350 Kb smaller than version 1.15.1.1.
- The *About* box was reworked.
- The project combo box was reworked. It is not possible to drag it any more.
- *RegEx* was reworked: it is now possible to paste clipboard and use carriage return in it.
- It is now possible to place the *Tools* panel at right or left of the main window.
- Two new hotkeys were added (not user-configurable):

```
<CTRL + ALT + LEFT>  : Tools align left;
<CTRL + ALT + RIGHT> : Tools align Right.
```

- It is possible to dock the `R` toolbar only at the opposite side of the *Tools* panel, not on the same side.

1.15.1.1 beta pre-release (Mar/01/2005)

- A picture was added when opening the program. Thanks `Carolina` (my daughter) for basic art creation.
- A new file was added to the project: Tinn-R_shortcuts.txt. It is possible to load the file from *Help/Tinn-R/Shortcuts*.
- *Open dialog* for Open file and *Add file* to project now allow the selection of multiple files.
- The database was reworked and a new information (location) was added.
- Tab order of the search/replace interface was reworked.

- Due to the growth of the code source, it is not possible any more to maintain Tinn-R code synchronized with the original Tinn project. So, Tinn-R is now a new open source project. The version numbers is thus changed. The new convention is: AA.BB.CC.DD S/B

```
That is,  AA : major version
BB : minor version
CC : release
DD : build
more : beta or pre-release version
```

- The status bar was reworked.
- A new menu *Web* was added.
- The *About* dialog box was reworked.
- The menu *Project* was completely reworked.
- New panel named *Tools* (with two tabs: *Computer* and *Project*) was added. This feature will grow up to enhance the interaction with R interpreter (progressive inclusion of SciViews-R dock Window feature like the object explorer).
- A new hotkey (not user-configurable) was added: CTRL + / (divide on the numeric keypad) show/hide the *Tools* panel.
- Second version of the R parameters completion proposal (call-tip). It now works with a user-expandable database (DBase) and with a R server (DDE - Dynamic Data Exchange through tcltk and svIDE packages). That is, this version communicates with R to get R function arguments directly if a function is not defined in the database. We thus have: database (priority 1) and R server (priority 2). To use the R server, the package svIDE (SciViews bundle) must be loaded in the current R session.

0.0.9.4 r1.15 beta 2 (Feb/11/2005)

- Bug(s) fixed:
  - Small bug with CTRL + Y (delete entire line), CTRL + T (delete word right from cursor) and CTRL + SHIFT + Y (delete words from cursor to the end of line) that did not enable the save options, was corrected.
- The position of the cursor is now preserved when using CTRL + * (multiply on the numeric keypad) to insert/replace text with parameters of the current R function.

- Send line now works when the cursor is on the end the line.

0.0.9.3 r1.15 beta 1 (Feb/11/2005)

- The problem with Tinn-R 0.0.9.3 r1.15 beta 1 (released 30 Jan 2005) that stopped working due to expiration of trial period for Delphi was solved.
- The first version with the R parameters completion proposal (Call-tip):
  1. It was made with a user-expandable database (DBase), that is, this version does not communicate with R to guess R function arguments;
  2. The component used is named TDBF, it is free (open source), does not use BDE and it is not necessary to have the database server. The DB engine code is compiled right into the Tinn-R executable. TDBF is a native data access component for Delphi, BCB, Kylix and FreePascal. More information can be found here.
- A new hotkey (not user-configurable): CTRL + * (multiply on the numeric keypad) inserts/replaces text with parameters of the active function (a call-tip must be visible).
- The *Application options* was reworked. It is now possible to set the basic application options for R Call-tip.

0.0.9.3 r1.14 (Feb/11/2005)

- Bug(s) fixed:
  - Some minor bugs were corrected and the buttons appearance was a little modified.
  - A bug with menu *File/Recent files* not showing at startup was fixed.
  - A bug which added the file extension twice was fixed. This bug was related to full name including the extension, like *myfile.r*, where Tinn-R recorded it as *myfile.r.r*.
  - A bug with save was fixed.
  - A bug with Pascal files extensions was fixed.
  - A bug with shortcut of the menu *Edit/Select all* was fixed.
- The problem with Tinn-R 0.0.9.3 r1.14 (released 30 Jan 2005) that stopped working due to expiration of trial period for Delphi was solved.

- New interface/options for printing, it remembers latest choices/preferences.
- *About* dialog box was reworked.
- The program user interface was a little reworked.
- Most of the interactive R tools do no require any more that files be saved with a valid S language extension (.r or .q).
- The R highlight dictionary was updated:
  1. About five hundred words were added;
  2. Fixed a bug with '_' in keywords like *.decode_package_version*.
- This version was compiled with Delphi 7 (Delphi 5 was used for previous versions).
- With Delphi 7, the default dialogs were re-established. So, psvDialogs is not used any more.
- Menu *Format/Block/Uncomment/Firsts occurrence* was renamed to Uncomment First Occurrence.
- Add menu *Help/Tinn-R/Changes on Line*.

A.9 VERSIONS RELEASED IN 2004 (16)

0.0.9.3 r1.14 beta 9 (Dec/04/2004)

- Bug(s) fixed:
  - Fixed a bug that caused R GUI window to shrink or expand to a certain size, whenever code was submitted to Rgui in MDI mode: thanks Steven!
  - Small bug with the function SEND FILE fixed when the file is set READ ONLY.
- For a while, it is strongly recommended to set the BACKGROUND COLOR of ALL SUPPORTED LANGUAGES to WHITE.
- The defaults Delphi dialogs were replaced by a new, free and good suite of components called psvDialogs written by Serhiy Perevoznyk. Thanks Serhiy! So, the Dialogs are now more pretty.
- Add menu *Format/Block/Uncomment first occurrence*.
- Search/Replace was improved with the solution proposed for the 0.0.9.0 r1.09 issue. The user can now work in all windows (even horizontally or vertically splitted): thanks the Tinn Team.
- The user can now work in all window (even horizontally or vertically splitted) for comment/uncomment blocks.
- The syntax selector on file load was reworked.
- Added *C# highlighter* instead of that mocked up Java one I had been using like a fool.

0.0.9.2 r1.14 beta 8 (Oct/2004)

- Menu *R\Show* and *Hide R Toolbar* was eliminated. This option is changed to *View\Toolbars\R* with others toolbars. It is a more logic place for this option.
- Menu *Editor: line below and top* was replaced by *Editor: Current line to top*. This improves work alternate with *Send: Line to end page* and *Editor: Current line to top*.
- The send line code was improved.
- The component SK donated by MJT Net was replaced by the sndKeys32.pas written by Ken Henderson and adapted for use in Tinn-R. This change impacts all send and controlling R function.

0.0.9.1 r1.14 beta 7 (Oct/2004)

- Bug(s) fixed:
  - Minor bug with menu *R/Controlling R* (enabled/disabled) was corrected.
- Tinn and Tinn-R can now run together.

0.0.9.1 r1.14 beta 6 (Sep/2004)

- Bug(s) fixed:
  - Minor bugs with general appearance (LikeXP, unlike XP) were corrected.
- Marco de Groot (Mattic Software), old Tinn developer, is the new co-author of the Tinn-R: welcome Marco!
- Backup and restore were reworked: now the user can choose the directory.
- Tinn-R is now more user-friendly to run with R: better R open/save dialogs.
- Save file interface was reworked: R files (*.r; *.q) is now the primary option.
- Open file interface was reworked: the three major file extensions are now the first one available:
  1. R files (*.r; *.q);
  2. Text Files (*.txt);
  3. All files (*.*).
- Add menu *Help/FAQ*.
- Delays in large files were corrected: thank you Marco de Groot.
- *About* was reworked: mails of all authors are now included.

0.0.9.0 r1.14 beta 5 (Sep/2004)

- Bug(s) fixed:
  - A small bug in resizing the gutter (respect to autoSize and bookmarks) was corrected.
  - A bug with bracket colors was corrected: it eliminated the bracket background when the active line highlighting is set to off.

- General stability was improved.
- Appearance was relooked.

0.0.9.0 r1.14 beta 4 (Aug/2004)

- A tooltip was missing in the *search in files* toolbar button.
- New tools to save/restore configuration files for Tinn-R are now added.

0.0.9.0 r1.14 (Aug/2004)

- Bug(s) fixed:
  - A bug when R and a graph device are maximized and the latter had the focus is now fixed (nothing happened in this case when sending data from Tinn-R to R).

```
Note: Tinn-R 0.0.9.0 r1.13 is now frozen and goes through a wider beta test
Tinn-R 0.0.9.0 r1.14 and over are considered development versions; they may
possibly show some instabilities during development.
```

- Specific R hotkeys are now automatically activated/deactivated.
- Hotkeys are now permanently set.
- For everyday work, use Tinn-R 0.0.9.0 r1.13

0.0.9.0 r1.13 (Jul/2004)

- Two new functions were added both to the R toolbar and the R menu: *Print content of selected variable* and *List names of selected variables*. Just experiment with these tools to figure out what they do (for instance, enter *iris* in a .R file edited in Tinn-R and try these two tools while this word is selected).
- The icon for *Help on selected word* was changed, and the *Send file* icon in the R toolbar now has a transparent background.
- The R highlight dictionary was updated (about a hundred words were added).

0.0.9.0 r1.12 (Jun/2004)

- Bracket matching is reworked back to a more classical presentation: match brackets are now presented in bold and in a contrasting color (i.e., red if symbols are in a different color, or blue if symbols are colored in red).

- The prior content of the clipboard is now preserved in all *Send to R* functions.

- Now the R console is completely cleaned when you use *Clear all* (previously, commands to clear the console where left at the command line).

0.0.9.0 r1.11 (Jun/2004)

- Bug(s) fixed:

  – Minor bug with match bracket was corrected.

- On the menu *Options/Application options* it is now possible to indicate if R resources are visible or not (switch between plain Tinn and Tinn-R).

- The menu *Tinn to R* was renamed *R*.

- Menu *Tools* was reworked. Tools/Initiate or Close preferred Rgui are now included in the *R* menu.

- *Copy Formatted* was added to the pop-up menu.

- Behavior of the R Toolbar was improved.

- Automatic match brackets was reworked: current bracket is shown surrounded by a red rectangle and previous match brackets are shown surrounded by a background symbol color of the specific highlighter (user defined). Thus, if the active line is highlighted (Options/Application options) and the cursor is moved throughout a line of text with some brackets, it is now possible to identify which brackets have already been matched during the cursor move.

0.0.9.0 r1.10 (May/2004)

- Bug(s) fixed:

  – Bugs with Search/Search in files/[x] Search in directories were corrected.

- The Window of the results of the Search/Search in files can now be moved.

- Project interface was reformulated and pop-up menu is now available.

0.0.9.0 r1.09 (Mar/2004)

- Bug(s) fixed:
  - Minor bugs with ControlBar (on resize for a lesser size that the ControlBar, close application and start new) and View/Toolbar (checked/unchecked) menu was corrected.
  - A minor bug (Save/Save as) with associated extensions was corrected.
  - A minor bug with hotkeys was corrected.
  - A minor bugs with project was corrected.
  - A minor bug with tollbar of macro was corrected.
- Comment/Uncomment block was reformulated. This now work like Tinn-R 0.0.9.0.
- Two new hotkeys (not user configurable) were added:

```
<CTRL + ADD> key (numeric keypad)
will insert/replace text with the attribution symbol '->';

<CTRL + SUBTRACT> key (numeric keypad)
will insert/replace text with the attribution symbol '<-'.
```

- Search/Replace was improved. It is possible now to decide if the occurrence will be, or not, replaced.

```
Temporarily, and until a better solution is found, to work properly,
if the window is horizontally split the Search/Replace must be  made
at the bottom (main) window, because if it's at the top window (secondary)
it doesn't question the confirmation to each substitution of the text occurrence.
If the window is vertically split, the Search/Replace must be made at the
left window (the right window does not question the confirmation to each
substitution of the occurrence). For both, any key will synchronize the split windows.
```

- Now Tinn-R can initiate (Tolls/Initiate ...) and close (Tolls/Close ...) preferred RGui. For the first, the path of preferred RGui must be previously set (Options/Application options).
- A new Tinn to R option was implemented: *Help selected word*.
- Interface (appearance and icons) was reformulated.
- Tinn-R hotkeys' interface was reformulated. Now it is possible to choose the desired hotkeys to main actions.

- On the menu *Options/Application options* it is possible to choose the appearance to Tinn-R like WinXP.
- It is possible to get the positions of Tinn-R toolbars (preserved) when application exits, and restore the next time it is started.
- On the (Edit/Copy formatted) it is possible to copy the native format and exported it in RTF, HTML and TeX format.
- Improvements were made to the highlighting.
- Now it is possible to open *Projects* files with one mouse click.

0.0.8.9 r1.08 (Mar/2004)

- Bug(s) fixed:
  - Small bug with Comment/Uncomment block was corrected.
- Now Tinn-R also runs with R, SciViews-R and S-Plus (the last still not finalized but it is running if the window Commands or S-PLUS - [Commands] have the focus).

0.0.8.9 r1.07 (Feb/2004)

- Specific HotKeys (F1..F11) were implemented for all Tinn to R functions. If and while activated, they overlap all the HotKeys of the Windows and any application running.
- Tinn-R now generates the two files (Tinn.ini and Shortcuts.ini) on C:\Documents and Settings*UserName*\Application Data (or Dados de aplicativos)\Tinn\.
- Upgrade Tinn 0.0.8.8 to 0.0.8.9 as changelog.
- A few tweaks were made in brackets highlighting, as per Marco's suggestions.
- jcfaria suggested a little fix to the File Search window. Russ put it in.
- jcfaria suggested a change to the RegEx filter interface to check, to make sure the filter won't be blank before running it. Russ put that in.
- Marco suggested a few changes to the open procedure. Now it checks if the file is changed and allows the user to open the file or not.
- fLineWdith has been commented out.

- Marco also suggested a few changes to the Search In Files code. Russ put that in, too.
- Russ pulled out the bitmaps on a few buttons in a few dialogs as per Marco's suggestion to keep things unified.

0.0.8.8 r1.06 (Feb/2004)

- Bug(s) fixed:
  - Bug = Assertion failure
    (c:\arquivos de programas\borland\componentes\synedit\source\SynEditWordWrap.pas, line149)

```
Why and when?

if you create a new file and type:

<ENTER>
and press <UP>  -> bug!

This was corrected: thank you Marco Groot!
```

0.0.8.8 r1.05 (Feb/2004)

- Comment/uncomment block was implemented: default symbol used for the comment/uncomment must be set in Options/Application options.

```
Comment block   : Format/Comment block   <ALT+C>.
Uncomment block : Format/Uncomment block <ALT+Z>.
```

- Option of Format/Colunm was eliminated: it is better to use this options (when necessary) keeping ALT pressed. This options are set in Options/Editor Options/(x)Alt sets column modes.
- ShortCuts to Print and Play macro were set the same = `CTRL + P`:

```
F7 : new shortcut to Record Macro
F8 : new shortcut to Play Macro.
```

APPENDIX B

R MANUALS ON CRAN

The R core team creates several manuals for working with R[1].
The platform dependent versions of these manuals are part of the respective R installations. They can be downloaded as PDF files from the URL given above, or directly browsed as HTML.

```
http://cran.r-project.org/manuals.html
```

The following manuals are available:

- An Introduction to R is based on the former "Notes on R", gives an introduction to the language and how to use R for doing statistical analysis and graphics.
- A draft of The R language definition documents the language per se. That is, the objects that it works on, and the details of the expression evaluation process, which are useful to know when programming R functions.
- Writing R Extensions covers how to create your own packages, write R help files, and the foreign language (C, C++, Fortran, ...) interfaces.
- R Data Import/Export describes the import and export facilities available either in R itself or via packages which are available from CRAN.
- R Installation and Administration.
- R Internals: a guide to the internal structures of R and coding standards for the core team working on R itself.
- The R Reference Index: contains all help files of the R standard and recommended packages in printable form, (approx. 3000 pages).

[1] The manuals are created on Debian Linux and may differ from the manuals for Mac or Windows on platform-specific pages, but most parts will be identical for all platforms.

The latex or texinfo sources of the latest version of these documents are contained in every R source distribution. Take a look at the subdirectory doc/manual of the extracted archive.
The HTML versions of the manuals are also part of most R installations. They are accessible by using the function `help.start()`.

APPENDIX C

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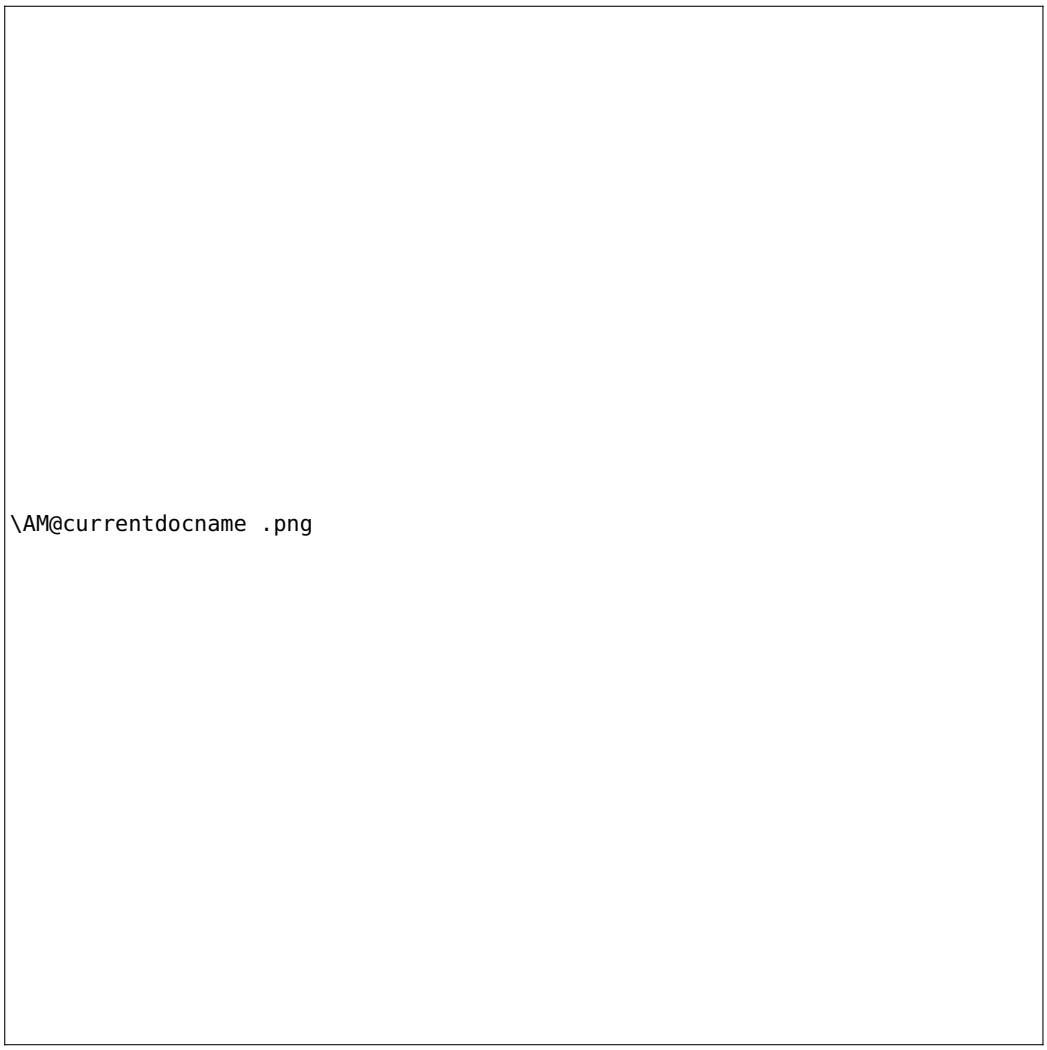

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