3. Complete Overview of Windows, Menus, Buttons and Boxes

3.1 Windows

3.1.1. CAT Main Window

The CAT main window pops up after clicking the CAT icon. According to the size of your screen or the size of the main window CAT was last left in the buttons of the button panel (3) may appear aligned.

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Figure 3.1 CAT Main window

	Name	Function
①	Close button	Closes the CAT window and finishes the CAT application.
②	Menu panel	Provides access to different menus.
③	Button panel	Provides different buttons for event control.
④	RECIPE window	Contains your CARP program.
⑤	STATE window	Contains the cell matrix.
⑥	Program label	Program name and version number.
⑦	Round counter	One of the two generation or round counters.
⑧	Event label	Contains the current event name and runtime mode (Step / Run).
⑨	LIST window	Contains compiler and runtime messages and output caused by your CARP program.
⑩	Maximize button	Enlarges your CAT application to the whole screen.

3.1.2. STATE Window

The STATE window displays the cell matrix of your current cellular automaton. The cell matrix may be customized in many ways (see pages 11 - 12 and 24 - 27).

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Figure 3.2 STATE window

	Name	Function
①	Close button	Disabled for this window.
②	Button panel	Allows customization of several properties (color mapping, color palette, figure format etc. Further description on p. 24 and p.11 - 14).
③	Cell matrix	Area in which the cells are displayed with their current color and/or figure values.
④	Round counter	Second round or generation counter.
⑤	Time label	Shows the time passed by in hh:mm:ss,msms (hours : minutes : seconds, milliseconds).
⑥	Maximize button	Enlarges the STATE window to all available CAT space.

3.1.3. RECIPE Window

The RECIPE window is the place where you can enter your CARP program (see p. 28 - 62) by which your cellular automaton is programmed.

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Figure 3.3 RECIPE window

	Name	Function
①	Window and file label	Indicates the file name of your CARP program (extension .CAR).
②	CARP program	Editable CARP program text.
③	Cursor position	Shows the current cursor position with its equivalent x- and y-values.
④	'Modified' mark	Appears as soon as anything in this window has been changed.

Editing work is supported by functions of the *Edit* (see p.20), *Search* (see p.21) and the two local menus (see p.23). The latter are invoked either by clicking the right mouse key or by clicking the right mouse key while holding the shift key pressed. Local menu functions also include printing and font customization.

3.1.4. LIST Window

The non-editable LIST window contains runtime, compiler error messages and messages created by your CARP program.

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Figure 3.4 LIST window

	Name	Function
①	File name	Indicates the name of the corresponding file (extension .CAL).
②	CARP program	Repeated CARP program (**not editable**).
③	Compilation result	Indicates whether compilation has been successful or not. You will find the offending code and a short error classification framed in '(***' marks where it occurs in the program text.
④	Text output	Text effected by corresponding CARP instructions.
⑤	Cursor position	Indicates the current cursor position with its x- and y-values.

3.1.5. Plane Window (Starring .CAS File)

The Plane window is a text window where all cells of the cell matrix appear with their current

state in figure format (decimal or hexadecimal). The Plane window pops up after pressing the state control button and selecting *'State' | 'Show'*.
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Figure 3.5 Plane window

	Name	Function
①	X-value	Gives the current X-value, eventually increased by the values for the border area (see XYBound settings).
②	Zet-value	Number of states of a cell defined by the Zet setting.
③	Y-value	Gives the current Y-value, eventually increased by the values for the border area (see XYBound settings).
④	cell matrix figure format	Current state of each cell in figure format.
⑤	Window and file label	Indicates the name of the corresponding file (extension .CAS)

3.1.6. Palette Window (Starring .CAP File)

The Palette window displays the current values of the color palette (see the glossary at the end of this manual). The Plane window pops up after pressing the palette customizing button and selecting *'Palette' | 'Show'*.