

Appendix B

Repeater Application

The Repeater is a program developed to ease the deployment of VDM++ VICE models, that deploys hundred to several thousand objects on many different CPU's. In general it can repeat code that only have minor changes in each repetitions. Figure B.1 shows the GUI of the Repeater with numbers corresponding to a description.

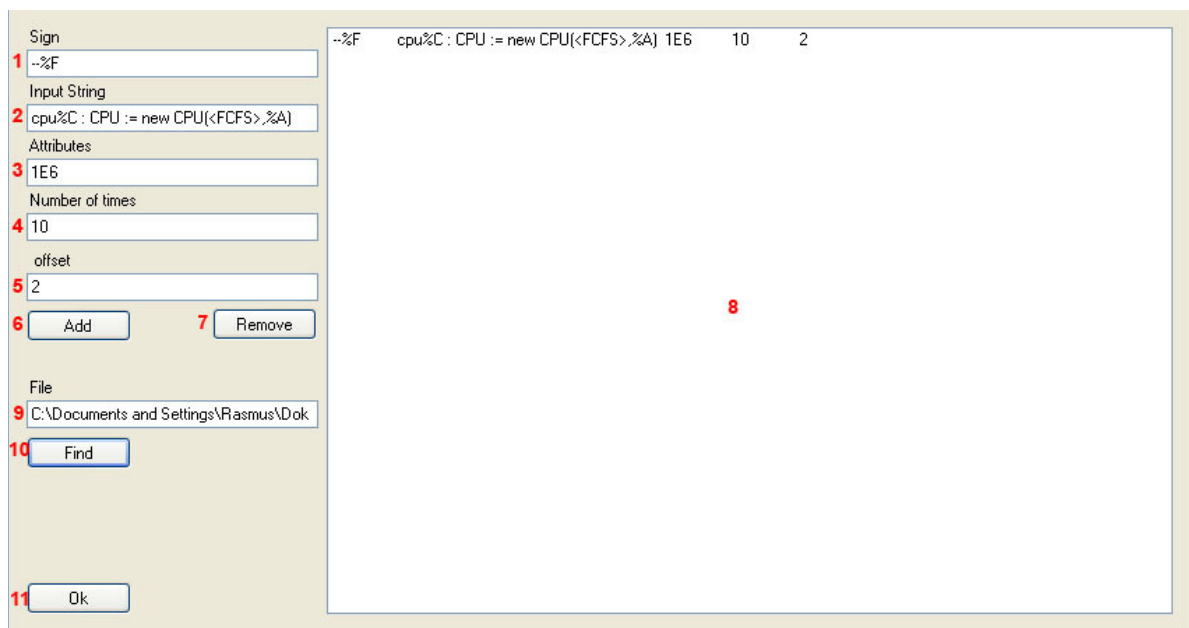


Figure B.1: The GUI of the Repeater

- 1 The sign is a string in the file, the Repeater looks for. At the signs location, it will insert the repetitions. The sign can be any string and the only requirement is that it has to

be unique in the file. Listing B.1 shows how a sign can be written into a file. The sign is on line 14 and it will be removed when the repetitions are inserted.

Listing B.1: Snapshot of a file with a sign

```

0 public static ctrl : Controller := new Controller();
1 public static sms : SMSGateway := new SMSGateway();
2 operations
3 CRSystem : () ==> CRSystem
4 CRSystem()=
5 (
6   cpu1.deploy(cb);
7   cpu1.deploy(grid2);
8   cpu3.deploy(grid);
9   cpu3.deploy(ctrl);
10  cpu2.deploy(apm);
11  cpu4.deploy(sms);
12
13  --Deploy
14 )
15 end CRSystem

```

- 2 This is where the string, that shall be repeated, is written. It is possible to insert a counter (%C), to create differences in each repetition. The counter can only count in numbers, it is not possible to define an alphabetic range. There can be more than one counter in an input string, they will however be counted up synchronously. There can be inserted an attribute sign (%A) which inserts what is written in field 3. There can also be more than one attribute in an input string.
- 3 This is where the attributes are written. There has to be the exact same number as there are attribute signs in the input string. The attributes have to be separated with a %.
- 4 This is the number of times the input string has to be repeated. It is also the amount of times that the counters will be incremented.
- 5 This is the offset of the counters, in this case there are two. This means that the first time the string will be inserted, the number inserted into the counters place will be 2, then 3 etc.
- 6 Adds the above fields as a repetition command to the input list.
- 7 Removes the selected repetition command from the input field.
- 8 This is the input list and it contains all the added repetition commands. Each repetition command needs to have a unique sign.
- 9 Path to the file.
- 10 Opens a file dialog and the selected path will be added to the file field (9).

11 Applies all the repetitions commands in the input list to the selected path.