

Institute for System Programming of the Russian
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**MicroTESK User Guide
(UNDER DEVELOPMENT)**

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Chapter 1

Installation

1.1 System Requirements

MicroTESK is a set of Java-based utilities that are run from the command line. It can be used on *Windows*, *Linux* and *OS X* machines that have *JDK 1.7 or later* installed. To build MicroTESK from source code or to build the generated Java models, *Apache Ant version 1.8 or later* is required. To generate test data based on constraints, MicroTESK needs the *Microsoft Research Z3* or *CVC4* solver that can work under the corresponding operating system.

1.2 Command-Line Options

MicroTESK works in two modes: specification translation and test generation, which are enabled with the `-translate` (used by default) and `-generate` keys correspondingly. In addition, the `-help` key prints information on the command-line format.

The `-translate` and `-generate` keys are inserted into the command-line by `compile.sh/compile.bat` and `generate.sh/generate.bat` scripts correspondingly. Other options should be specified explicitly to customize the behavior of MicroTESK.

Options:

Full name	Short name	Description
-help	-h	Shows help message
-verbose	-v	Enables printing diagnostic messages
-translate	-t	Translates formal specifications
-generate	-g	Generates test programs
-output-dir <arg>	-od	Sets where to place generated files
-include <arg>	-i	Sets include files directories
-extension-dir <arg>	-ed	Sets directory that stores user-defined
-random-seed <arg>	-rs	Sets seed for randomizer
-solver <arg>	-s	Sets constraint solver engine to be us
-branch-exec-limit <arg>	-bel	Sets the limit on control transfers to
-solver-debug	-sd	Enables debug mode for SMT solvers
-tarmac-log	-tl	Saves simulator log in Tarmac format

1.3 Overview

Chapter 2

Appendixes

2.1 References

Bibliography

- [1] M. Freericks. *The nML Machine Description Formalism*. Technical Report TR SM-IMP/DIST/08, TU Berlin CS Department, 1993.