**MicroTESK** is a reconfigurable model-based test program generator for microprocessors. It is customized for a particular architecture by using light-weight instruction set specifications, which makes it easy to support various RISC and CISC architectures and facilitates automated extraction of knowledge about situations to be covered by tests. A convenient test template framework allows rapid development of complex verification scenarios.

**Target Architectures**
- MicroTESK is retargetable: RISC, CISC, VLIW, DSP
- Primary focus on RISC architectures: ARM, MIPS, SPARC + custom designs

**Generation Methods**
- Random
- Combinatorial
- Constraint-based
- Model-based

**More information is available at:** [http://forge.ispras.ru/projects/microtesk](http://forge.ispras.ru/projects/microtesk)

**C++TESK** is an open-source C++-toolkit aimed to facilitate functional verification of RTL hardware designs. The core of the toolkit is a library of classes and macros defining the means for creating reference models, RTL adapters, stimulus generators, reaction checkers, and test coverage metrics. Besides, the toolkit includes the Eclipse-based IDE and the tools for dynamic test parallelization on computer clusters.

**Testbench Functions**
- Stimulus generation
- Reaction checking
- Test coverage tracking
- Failure diagnostics
- Report generation

**Testbench Development**
- Reference models
- RTL adapters
- Stimulus generators
- Reaction checkers
- Test coverage metrics


**Retrascope** is a toolkit for Reverse Engineering and TRAnsformation of register-transfer-level (RTL) descriptions written in HDL. It is planned to be an extendable framework including tools for automated analysis of HDL descriptions and generation of unit-level tests. The toolkit will be applicable for verification of industry-scale hardware modules.

**Main features**
- VHDL/Verilog support
- Automated extraction of EFSM/Flowchart models
- Unit-level test sequence generation
- Formal analysis (model checking, deadlocks)
- Models visualization (GraphML/Zest)
- Eclipse IDE plug-in

**More information is available at:** [http://forge.ispras.ru/projects/retrascope](http://forge.ispras.ru/projects/retrascope)