Deep Static Analysis for Security and Quality Assurance

Goanna™ is the leading static C/C++ code analysis solution for detecting security vulnerabilities and quality issues in safety critical embedded software. Supporting compliance for security and safety requirements such as OWASP, CERT, CWE and MISRA, as well as combining the latest program verification research with seamless IDE and build server integration, Goanna™ is one of the easiest and most powerful solutions for creating code confidence for development teams.

**CATCH SOFTWARE DEFECTS BEFORE THEY GET INTO YOUR PRODUCT**

Goanna™ deep static analysis automatically finds security vulnerabilities and quality defects in your C/C++ programs using only the source code. No compilation, simulation, or execution required.

By detecting bugs at the earliest possible phase of the development cycle, you can
- reduce security risks
- improve product quality
- minimize maintenance
- get your product to market faster

Goanna™ integrates seamlessly with most IDE's and build environments, placing the power of deep static analysis at your fingertips with just a single click. No lengthy setup costs or disruption to your existing workflow.

**UNIQUE TRACE SIMULATOR**

Goanna™ can “replay” traces of complex bugs directly in your IDE, allowing you to pinpoint the root cause of defects faster.

**LIVE INCREMENTAL ANALYSIS**

Goanna™ only reanalyses the parts of your program that have changed since the last run, allowing rapid test/debug cycles without waiting hours for a rebuild.

**INDUSTRY STANDARDS**

Goanna™ supports compliance with a number of industry safety and security standards:
- OWASP
- CERT
- SANS
- CWE
- ISO 26262
- MISRA C:2012
- DO-178B
- MISRA C++:2008

**CUSTOMIZABLE CHECKS**

Checks are easily customizable for your company’s standards and requirements.

**AWARD-WINNING TECHNOLOGY**

Goanna™ incorporates advanced Turing award-winning model checking technology, providing complete coverage of all execution paths in even the most complex functions.

**PATH-SENSITIVE WHOLE PROGRAM ANALYSIS**

Goanna™’s unique patent pending technology for whole program interprocedural analysis can find defects across call chains spanning many function and file boundaries, to arbitrary depth.

**ABSTRACT DATA TRACKING**

Goanna™ tracks values, sizes, and address calculations at all points in your program, finding bugs that can easily be missed by testing and manual inspection alone.

**OVER 250 HIGH-VALUE CHECKS**

Injection threats
Concurency bugs
Null pointer bugs
Dead code
Array overruns
String overruns
Portability bugs
Memory overruns
Security flaws
Memory leaks
Unsafe libraries
Arithmetic errors
Devision by Zero

Plus check packages for security and quality standards and customized needs

Customers of Goanna verification tools include automotive, aerospace, defense, medical, and critical infrastructure and services system companies from around the world.
About Red Lizard Software

WHO WE ARE

Red Lizard Software is a NICTA innovation spin-out delivering the Goanna™ static analysis security and quality solutions.

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