Solid Sands launches its new product SuperGuard
C Library Safety Qualification Suite to ease software approvals
for safety-critical applications

- *Comprehensive documentation of C library test requirements, test specifications, and implementations provides developers with the information needed to comply with functional safety standards*
- *Full traceability and transparency between library test and the requirements derived from the ISO C language standard*

Amsterdam, The Netherlands – 2 June 2021 – Solid Sands, the world leader in compiler testing and validation, today announced the release of SuperGuard C Library Safety Qualification Suite. Within SuperGuard, the requirements and test specifications are documented for the C library tests, as already available in SuperTest.

"Many of our customers, including those in industries developing safety critical applications, have alerted us to their need to qualify the standard libraries. The library becomes an integral part of the applications, while surprisingly there was a lack of professional tools for library qualification in the market. That observation made us decide to develop SuperGuard," explained Marianne Damstra, CCO of Solid Sands. "As the world's most prominent player in testing compilers for use in the safety-critical application domain, combined with our in-depth knowledge of testing and requirements, we were perfectly suited and able to build SuperGuard to be the most comprehensive library qualification tool available today."

SuperGuard provides full traceability between the requirements derived from the ISO C language definition and the test suite. SuperGuard maintains the documentation needed to deliver information and transparency as required by international certification authorities.

"All C compilers are used with a standard library. Functions from the library are linked into the application and a executed on the target. This makes it incumbent on developers of safety-critical applications to demonstrate that the library code is as rigorously tested as code they write themselves," said Marcel Beemster, CTO of Solid Sands. "Our current product SuperTest not only validates the compiler, it also contains a comprehensive suite of tests to validate the library. We needed to provide developers with the necessary documentation to show how those library tests are based on requirements and test specifications, to the level required by functional safety standards."

The C language specification does not explicitly define a set of requirements that can be tested for each library function, yet such requirements are an essential component of functional safety standards approvals such as ISO 26262. They therefore need to be created from the language specification by the test developer, which in this case is Solid Sands. These requirements and the traceability to the tests are what differentiates SuperGuard.

The products of Solid Sands are rapidly becoming the 'gold-standard' for compiler and library qualification in safety-critical applications.

SuperGuard C Library Safety Qualification Suite will be available in summer 2021, both as a stand-alone product and as an add-on for SuperTest users. A similar package for the C++ standard library is currently under development.

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About Solid Sands
Founded in 2014, Solid Sands is the one-stop shop for C and C++ compiler and library testing, validation and safety services. Solid Sands offers extensive test and validation suites with a unique level of compiler and library test coverage, enabling customers to achieve the software tool quality level demanded by ISO standards. The company's name combines sand – the world's most abundant source of silicon – with the solidity and security expected of sector-leading testing and validation technologies. More information on the company's products and services is available at www.solidsands.nl. You can follow Solid Sands on LinkedIn, Twitter and YouTube.

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