

Hardware-Independent Safety-Solution: For the first time at the SPS 2022 in Nuremberg

New solution for your sustainable next-generation safety platform

Teaser

SIListra Systems GmbH based in Dresden is in the year 2022 for the first-time exhibitor on the SPS in Nuremberg. The company presents itself as part of the leading trade fair for smart and digital automation in hall 7 booth 580 in the CODESYS pavilion. SIListra Systems' experts are available for questions and answers about the SIListra Safety Transformer. They explain how to develop safety controllers without redundant hardware channels with standard hardware (COTS). SIListra Systems' presents the solution *LIVE* at the booth and shows also a prototype of such a platform developed together with CODESYS. Visitors can discuss their safety applications with SIListra Systems' experts and get to know the benefits and advantages of this new and sophisticated technology.

Body

SIListra Systems GmbH is a highly specialized technology company with solutions for functional safe controllers. Its focused service offer allows customers to fulfil the highest requirements for safety. SIListra Systems' solution enable the execution of safety critical applications on single-channel standard-hardware (COTS). Therefore, SIListra Systems offers the Diversified Encoding method (checked by TÜV Süd) and the software development tool SIListra Safety Transformer. The core task of this solution is to diagnose random failures at runtime. With this solution users are able to meet the safety requirements of IEC 61508, ISO 26262 and IEC 13849 on single-channel standard-hardware. Safety functions in areas such as automation, control units, and robotics can be implemented more flexible, more cost effective and more sustainable in comparison to established multi-channel hardware-solutions.

The SIListra Safety Transformer enables to develop scalable and customizable software- and hardware-architectures for safety controllers. These architectures do not require redundant hardware channels. The software development tool automatically instruments the coded processing technology directly into the source code of the safety application (C and C++). The resulting program detects random failures without further hardware support. Thereby the safety function can run on standard-hardware still fulfilling the safety requirements, e.g. from IEC 61508 up to SIL 3. Developers of controllers for robots, plants, and safety devices can evaluate the SIListra Systems' solution for their safety applications.

After a successful evaluation system developers can drastically reduce the total cost, as among other things, no multi-channel hardware needs to be developed and produced. Hardware-updates are less complex, because coded processing abstracts from the concrete hardware. Additional software methods to detect random failure do not need to be implemented manually, e.g. instruction set tests and program flow control. Security and safety functions are more easy to combine, because safety applications can run together with security components (e.g. the Linux-kernel) on the same hardware. This is because, SIListra Systems' solution detects

failures, that propagate from such non-safety critical components into the safety applications. Hence, the security components can be updated (according to the security guidelines) independent of the safety application.

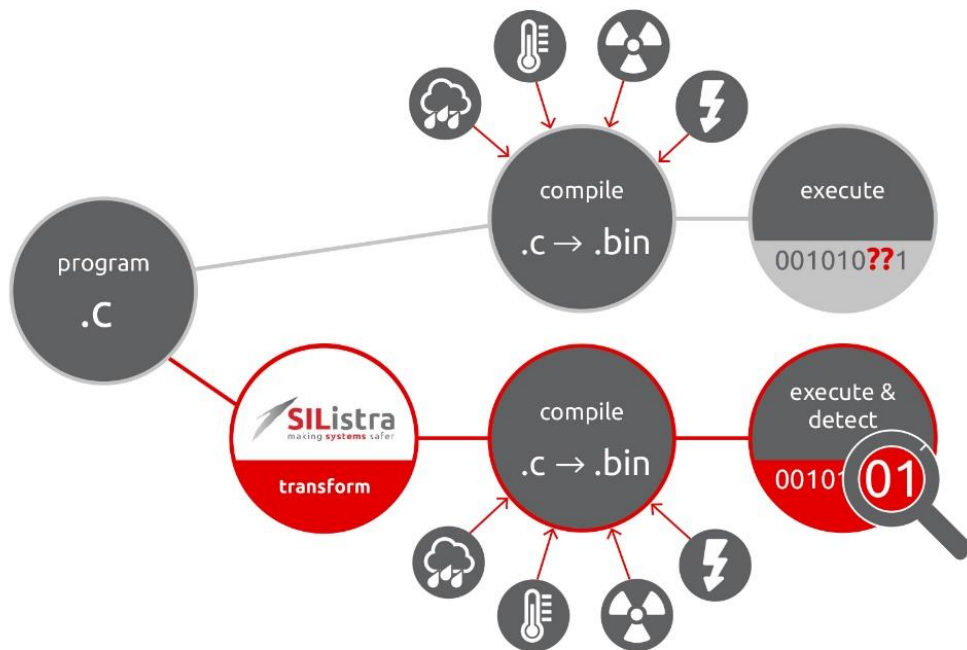


Image: SIListra Safety Transformer generates code to diagnose random failures



Image: SIListra Systems GmbH based in Dresden



About SIListra Systems GmbH:

SIListra Systems GmbH is an innovated IT company, that was spined-off the Technical University of Dresden in 2012. Their founding employees researched specialized software-methods and their application in software development tools for safety applications for many years before the foundation of the company. More information about the company and their solutions are available on the company's website: silistra-systems.com. SIListra Systems offers exciting jobs for professionals, junior developers and trainees in areas of the software tool development and the application of diversified encoding: <https://www.silistra-systems.com/career/>

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