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**OneSpin Solutions Enters EDA Market with Breakthrough Formal Verification Solution
*OneSpin 360 Module Verifier First To Enable True Functional Sign-off and Risk-Free IP Reuse***

MUNICH, Germany – May 8, 2006 – OneSpin Solutions GmbH today entered the Electronic Design Automation (EDA) market with a verification solution that has been proven in the field to detect *all* functional errors in complex digital modules and intellectual property (IP), enabling true functional sign-off. Based on more than 250 engineer-years of formal verification technology development at Infineon and Siemens, this new automated, static formal verification solution – OneSpin 360™ Module Verifier (360 MV) – delivers the highest quality of results (QoR) that today's functional verification can achieve, while dramatically reducing time to results (TtR) and cost of results (CoR). Verifying peripherals, processors, and processor-based subsystems of up to a few hundred thousand lines of code, 360 MV can save millions of dollars in respin costs and increase revenues by speeding time-to-market.

According to Alexander Haggemiller, Director Intellectual Property and Re-Use at the Communication Solutions business group at Infineon Technologies, "Using OneSpin technology, we fully verified the PPv2 protocol processor, including its advanced context switching, which is a central IP component of our communication applications. This verification approach assured that the complete functionality of the PPv2 was covered and bug escape routes blocked. Moreover, the total verification effort was about 40% less than that in a previous, simulation-based project."

Dr. Markus Schutti, Director Digital Development at DICE GmbH & Co KG, added, "We used OneSpin's property verification on numerous modules and discovered that writing and proving properties is easier and much faster than setting up test-benches. Short response times, even on large modules, allow very fast check-debug-fix cycles – often within minutes. We used OneSpin's solution on a well-simulated communication peripheral IP for base-band chips and found 15 additional awkward errors with four person-weeks' effort."

Risk-free functional sign-off

The 360 MV solution enables verification engineers to verify functional compliance between the transaction and register transfer (RT) levels to produce the extreme quality needed for risk-free reuse of IP components, especially processor cores. Its rigorous, automatically checked termination criterion eliminates the time-consuming and expensive regression testing that merely estimates achieved quality levels. The combined QoR, TtR and CoR advantages of 360 MV make it ideal for in-house and third-party IP providers for System-on-Chip (SoC) designs. Using IP verified with OneSpin's "true functional sign-off" methodology, SoC design teams can proceed to chip integration and chip-level functional simulation knowing that the individual modules operate free of functional errors.

The 360 MV solution uses proprietary algorithms to detect errors that even the most advanced simulation-based approaches miss – unstimulated, overlooked or falsely accepted errors. It systematically blocks all these error escape routes inherent in simulation. The 360 MV methodology leapfrogs coverage-based bug-hunting approaches – used by both simulation and other formal tools – in which design teams never can be certain what quality level has been achieved. It determines beyond doubt that verification is completed.

Holger Soukup, Director SoC Development, Siemens Com, Munich, said, "Our team has used OneSpin's technology in the verification of various designs, including two 4-million-gate SoC designs with extremely complex logic and multiple re-use blocks. It turned out that OneSpin's formal module verification perfectly



completed our verification portfolio. For the functionalities being verified, it was less costly, faster and yielded higher quality than any kind of dynamic verification. Furthermore, the improved block quality considerably reduced our costs for system-level verification. As a result, we met both a very tight time-to-market schedule and our quality aims."

Lower cost, higher productivity

OneSpin's technology has achieved verification productivity ranging from 2,000 to 4,000 lines of fully verified RTL code per engineer-month in hundreds of successful module verification projects. The lean, highly portable 360 MV infrastructure requires no expensive simulation environments with their plethora of interacting verification tools, and no costly hardware such as compute farms, accelerators or emulators. Further, it requires no change to established design flows, and smoothly integrates into chip-level functional simulation.

OneSpin's founder, Chief Technology Officer and Managing Director Wolfram Büttner commented, "We're pleased that our 360 MV solution provides our customers the ability – for the first time – to furnish IP users with the bug-free IP that they expect and need. Moreover, design teams can use our established equivalence checker to preserve this high level of quality throughout the design cycle."

OneSpin's Vice President of Sales and Marketing, and Managing Director Thierry Le Squeren added, "Our technology has been field-proven on hundreds of complex modules, including advanced processors, controllers and diverse peripherals. In many chip designs, the technology proved *all* modules in the design. Now IP providers no longer need to compromise quality, cost and schedule. We provide a solution that improves all three."

Pricing and availability

The 360 MV solution is available now, priced from Euros 175,000 for a one-year license.

ABOUT ONESPIN SOLUTIONS

OneSpin Solutions provides electronic design automation (EDA) methodologies, tools and services for fundamental verification tasks at transaction, RT and gate levels. OneSpin's patented technology builds on 250 engineer-years of innovation and development, and has been field-proven on hundreds of complex designs to increase the quality of results, while reducing the cost and time to results. Market-leading consumer, telecommunications, automotive, computer, and embedded system companies rely on OneSpin's technology to achieve true functional sign-off for their complex subsystems, processors and peripherals, and to preserve this quality level through subsequent design phases. Privately held, OneSpin was founded in 2005, and is headquartered in Munich, Germany. For further information please visit <http://www.onespin-solutions.com/> or email info@onespin-solutions.com.