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STMicroelectronics Unveils Free and Feature-Rich Simulator to Aid Design for Electromagnetic Compatibility (EMC)

- *Free online simulation tool compares and contrasts electrical performance of ESD-protection devices and their impact on signal integrity*
- *Enables optimal component choice for the target application, avoiding design spins, delays, and related expenses*
- *Powered by Keysight Technologies' Advanced Design System (ADS) software*

Geneva, June 27, 2016 – STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, is helping protect today's smart devices by making shirt pockets, car dashboards, office desks, and other statically dangerous locations safer through the introduction of a new software tool that guides the selection of the right protection components for integrated-circuit designs right from the beginning.

People, clothing, and objects can easily accumulate static charges of many thousands of volts that may give a minor shock to the human body but present a growing threat to increasingly delicate chips in devices like smartphones and tablets, computers, or televisions. Exposed ports such as USB or HDMI™ sockets are especially vulnerable to these electrostatic discharges (ESD). The protection circuitry needed to handle ESD energy often requires testing with a real prototype where late design changes add to costs and cause delays.

[ST's new free online software tool, ESD-SIM](#), answers this challenge. It is capable of assessing both circuit protection and signal integrity, to help select the right ESD-protection components from ST's portfolio before hardware is built.

"ESD-SIM delivers a significant boost to circuit-board design efficiency, enabling engineers to evaluate electrical performance of protection-circuitry components online and jumpstart their designs by using Keysight's simulation technology with ST component models," said Ricardo De Sa Earp, ASD and IPAD Division Manager, STMicroelectronics.

ST has adopted Keysight EEsof EDA software, including ADS, for design and simulation as it is the gold standard for high-frequency and high-speed simulation. Now, ESD-SIM makes the ADS simulator available online, for evaluation of ST's protection components.

ESD-SIM now allows engineers to finalize their choice of ESD protection at an early stage and move on to design higher-value product features without fear of encountering extra costs and delays later in the project.

ESD-SIM has been created for ST by tools specialist Transim, with simulation powered by Keysight's ADS. ESD-SIM provides a quick and easy way to evaluate the performance of ST devices using the industry-standard high-speed/high-frequency SPICE simulation engine in ADS. The validation output of the online tool is free of charge, and it further provides an ADS workspace to jumpstart the design process in commercially available design software.

"As a free tool, the revolutionary ESD-SIM will change the way all engineers design their circuit boards, and eliminate the hassles associated with last-minute changes to correct unforeseen problems," said Torsten Goebner, Development and Engineering Manager at Transim.

The tool uses [ST's TVS \(Transient Voltage Suppressor\) SmartSelector](#) to choose suitable protection components, whether the application is digital, analog, automotive, or power. ESD-SIM then runs ESD and signal-integrity simulations, using Transmission Line Pulse simulation, eye diagrams, time-domain reflectometry and S-parameters to ensure high-speed signals such as USB 3.1, HDMI, DisplayPort™, or SATA satisfy the applicable specifications. This can be done quickly and easily, requiring only seven mouse clicks. Pre-configured simulation setups and signal tests are included, which saves any need for the user to create tests and ensure compliance with the relevant standards. The simulations are also customizable, and users can save and share designs with local teams or the ESD-SIM community.

ESD-SIM is available now, free of charge to any user registered at my.st.com.

For further information please go to www.st.com/esd-design-pr

About STMicroelectronics

ST is a global semiconductor leader delivering intelligent and energy-efficient products and solutions that power the electronics at the heart of everyday life. ST's products are found everywhere today, and together with our customers, we are enabling smarter driving and smarter factories, cities and homes, along with the next generation of mobile and Internet of Things devices.

By getting more from technology to get more from life, ST stands for life.augmented.

In 2015, the Company's net revenues were \$6.90 billion, serving more than 100,000 customers worldwide. Further information can be found at www.st.com.

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