IEEE REBOOTING COMPUTING LAUNCHES INITIATIVE TO RETHINK THE COMPUTER

New program supported by the signing of an agreement with the International Technology Roadmap for Semiconductors and introduction of the Low Power Image Recognition Competition

PISCATAWAY, N.J., USA, 4 March 2015 – IEEE, the world's largest professional organization dedicated to advancing technology for humanity, officially unveiled IEEE Rebooting Computing (RC), an initiative that proposes to rethink the computer through a holistic look that addresses all aspects of computing. Through exponential performance scaling, the IEEE RC initiative aims to help the computing industry turn the corner to surpass its current setbacks and challenges—specifically regarding the deceleration of computational power and capacity.

To reinforce the importance of this initiative, IEEE RC and the International Technology Roadmap for Semiconductors (ITRS) have established an agreement on how to collaborate on the innovative future approaches to computing.

"Exponential growth of computing power has been a fundamental driver of improving the human condition," said Thomas M. Conte, professor for the Schools of Computer Science and Electrical & Computer Engineering at Georgia Institute of Technology, IEEE Computer Society's 2015 president and co-chair of IEEE RC. "The IEEE Rebooting Computing initiative is timely due to the emerging consensus that the primary technology driver for almost five decades, Moore's Law for scaling of integrated circuits, is finally ending. We need to review the entire basis for computer technology, starting over again with a new set of foundations. That's how we continue to project further improvements in computing performance in the coming decades."

"We have already hosted three IEEE Rebooting Computing summit meetings with industry thought leaders and other computing experts, one in Washington, D.C. and two in Santa Cruz, California," said Elie Track, CEO for nVizix, past-president for the IEEE Council on Superconductivity and co-chair of IEEE RC. "Attendees and summit participants discussed several computing topics, including the three pillars of future computing, which include energy efficiency, security and applications/HCI (Human-Computer-Interface), then to engines of computation, and algorithms and architectures."

Under the terms of the agreement, IEEE RC and ITRS will cooperate to encourage the exchange and dissemination of technical information, and to promote understanding and cooperation between the organizations' members. This agreement defines collaboration as mutual representation, technical meetings, publications and other joint activities such as events, educational materials and more.

"The ITRS shares IEEE Rebooting Computing's mission to restore computing to its historic exponential performance scaling trends so our society and future societies can benefit," said Paolo Gargini, ITRS Chairman. "Our agreement will ensure we help fundamentally shift the computer industry's focus, resources, time and attention on to new possibilities for computational performance."

As a cornerstone effort of IEEE RC and its mission to exponentially improve computing performance, the initiative is launching the [Low Power Image Recognition Competition (LPIRC)](#). The competition aims to discover the best technology in both image recognition and energy conservation. Winners will be evaluated based on both high recognition accuracy and low-power usage. Now open for participants, the competition will continue through June and a winner will be selected at the Design Automation Conference, June 7-11, 2015 in San Francisco.

To learn more about IEEE RC, visit rebootingcomputing.ieee.org. Join the IEEE RC virtual communities: follow us [@IEEERebootComp](#) and connect with us at the [IEEE Rebooting Computing LinkedIn Group](#).

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