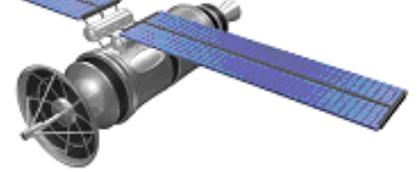


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The Global Semiconductor Industry Analysts

FH MONDAY

12 October 2015

Apple Acquires Artificial-Intelligence Startup

Apple Inc. has purchased an artificial-intelligence startup that could help make iPhone users' interactions with the virtual assistant Siri more natural.

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ST car MCU shifts gears from Power to ARM I

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Cadence sets up R&D facility in Pune

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TALK TO US



5nm test chips carve new path for EUV

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NXP, Siemens team up

NXP Semiconductors and Siemens have joined forces to enable secure, intelligent vehicle networking. The latter will employ technology from both NXP and Cohda Wireless for secure communication of vehicles with surrounding traffic infrastructure.

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Apple Acquires Artificial-Intelligence Startup VocallQ

Apple Inc. has purchased an artificial-intelligence startup that could help make iPhone users' interactions with the virtual assistant Siri more natural.

Apple bought VocallQ Ltd., a U.K.-based software maker working on ways to improve computers' ability to understand human speech and to "speak" more naturally. Terms of the deal weren't disclosed.

An Apple spokesman confirmed the deal with the company's standard statement after an acquisition, saying Apple "buys smaller technology companies from time to time, and we generally do not discuss our purpose or plans." VocallQ didn't immediately respond to a request for comment.

ST car MCU shifts gears from Power to ARM

STMicroelectronics has licensed the ARMv8-R processor technology, ARM's first full-blown automotive MCU core, and has revealed that it will deploy the technology in 32bit MCUs aimed at real-time safety-related smart driving applications and in industrial applications.

With an eye toward becoming the world's third largest automotive MCU supplier by the end of the decade, ST is staking its automotive future on ARM's 32bit ARMv8-R technology.

Partners with Freescale since 2006 to design high-performance, cost-effective 32bit MCUs based on Power architecture for automotive applications, ST is now switching gears to go all in with ARM for the automotive market.

Cadence sets up R&D facility in Pune

Cadence Design Systems has established a new R&D facility in Pune, which will develop configurable processors and related products, the Hindu Business Line reported.

Two years ago, Cadence acquired Tensilica, which put up an R&D facility in Pune in 2006.

"The team in Pune is working on cutting-edge development of digital signal processors (DSP) and other IP technology, and the Pune facility is among the best-in-class globally," Business Line quoted Jaswinder Ahuja, corporate vice president and managing director at Cadence, as saying.

The new facility will engage in designing software for different Tensilica DSP cores, creating an integrated design environment for Xtensa processors, contributing to RTL verification and providing technical support to customers globally.

5nm test chips carve new path for EUV

Imec and Cadence Design Systems have teamed up on a couple of test chips, involving SRAM and placed-and-routed processor cores, made with line pitches as small as 24nm, close to the theoretical limit of quad-patterned immersion process. According to them, the test chips pushed to their limits today's 193-immersion and future extreme ultraviolet lithography (EUV).

The tests confirm using a mix of 193i and EUV techniques likely is the best approach as the industry drives toward the limits of Moore's Law. Researchers tested three approaches to making the chips, using all 193i steppers, using all EUV and using a mix of 193i and EUV systems.

The 193i-only approach was potentially the most expensive, requiring quad patterning for metal layers and triple patterning for vias. (Extra passes require more time, mask layers and thus cost.) The all-EUV approach needed fewer layers and supported better area, power and performance but was not practical given the still immature state of EUV systems.

NXP, Siemens team up for smart traffic management systems

NXP Semiconductors and Siemens have joined forces to enable secure, intelligent vehicle networking. The latter will employ technology from both NXP and Cohda Wireless for secure communication of vehicles with surrounding traffic infrastructure.

Siemens will deploy NXP technology for various ITS field tests and pilot projects, including the A58 motorway in the Netherlands, A9 motorway in Germany and the Living Lab in Austria.

The German company expects to globally deploy transport infrastructure such as overhead sign gantries and traffic lights in its roadside units (RSUs). RSUs are 802.11p WLAN-based radio modules that transmit information such as speed limits, warnings of icy roads or other dangerous situations, traffic jams and construction warnings within a fraction of a second to passing vehicles and traffic control centres. The successful adoption of vehicle to infrastructure technologies is expected to reduce traffic congestion, vehicle accidents and auto-related pollution.