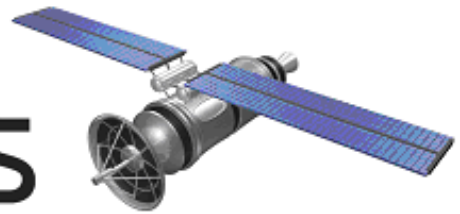


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The Global Semiconductor Industry Analysts

FH MONDAY

17 July 2017

Qualcomm, Apple, Samsung and You

As Samsung leapfrogs Intel and Qualcomm strikes new blows in its boxing match with Apple, engineers need to cover their bets and enjoy the show. Qualcomm exercised six broad smartphone patents against Apple in two court actions yesterday, asking for damages and a ban on importing allegedly infringing iPhones.

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Intel Brings VR, 5G to Olympics

SAN JOSE, Calif. — Intel will build new kinds of experiences for the 2018–2024 Olympic games using virtual reality, 5G cellular, and drones, the chip maker announced. It becomes the 13th partner of the games and the fifth tech partner following Alibaba, GE, Panasonic, and its closest rival, Samsung.

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ASML Claims Major EUV Milestone

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TALK TO US



Imec Aims 2-D FETs at Sub-5-nm Node

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Four Technologies for Industry 4.0

The challenge of merging IT with OT domains is to assemble in one place four requisite industrial IoT technologies: networking, processing, user interface, and security.

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Qualcomm, Apple, Samsung And You

As Samsung leapfrogs Intel and Qualcomm strikes new blows in its boxing match with Apple, engineers need to cover their bets and enjoy the show.

Qualcomm exercised six broad smartphone patents against Apple in two court actions yesterday, asking for damages and a ban on importing allegedly infringing iPhones. The actions are the latest in a set of related battles expected to take more than a year to lumber through the courts, so don't fret about getting your iPhone 8 or 10 or whatever it will be called.

The good news is after the smoke clears in this ugly tussle, the industry might get some more clarity on the value of at least one set of mobile patents. It's my hope the courts will provide some significant legal precedents around Qualcomm's large and widely asserted portfolio.

Many have felt the strong arm of lawyers knocking on their doors claiming royalties and a churn in the gut over what's fair. The lawyers and the stomach aches won't go away because a top smartphone maker and its major SoC provider had a major break up.

Intel Brings VR, 5G To Olympics

SAN JOSE, Calif. — Intel will build new kinds of experiences for the 2018–2024 Olympic games using virtual reality, 5G cellular, and drones, the chip maker announced. It becomes the 13th partner of the games and the fifth tech partner following Alibaba, GE, Panasonic, and its closest rival, Samsung.

The events will showcase Intel's work in a handful of emerging technologies, including live-streaming video with its 360-degree cameras, 5G, and machine learning. As part of an event announcing the deal, Intel broadcast a video stream from its headquarters using one of its prototype 28-GHz 5G base stations.

Intel chief executive, Brian Krzanich, promised "whole new ways [that] fans and athletes can view and participate in the games ... Around the world, there are millions and millions of people who have never had a chance to go to the Olympics, and our goal is to bring it to anyone.

ASML Claims Major EUV Milestone

SAN FRANCISCO—It has taken far longer and cost far more than nearly anyone would have predicted, but the semiconductor industry finally appears close to moving extreme ultraviolet (EUV) lithography into high volume production.

At the Semicon West tradeshow here this week, lithography vendor ASML announced it had achieved an important and long-elusive milestone: the demonstration of a 250-watt EUV source. Source power—a measurement of the amount of EUV photons delivered to the scanner to enable wafer exposure—equates directly to productivity. Chipmakers have long insisted that source power of 250 watts would be required to achieve throughput of 125 wafers per hour (WPH), and the inability of ASML and Cymer (which ASML acquired in 2013) to push the technology to hit that mark has been considered the primary roadblock for EUV development in recent years.

Imec Aims 2-D FETs at Sub-5-nm Node

LAKE WALES, Fla. — Designers can extend Moore's Law scaling beyond the 5-nanometer node by choosing two-dimensional anisotropic (faster with the grain) materials such as monolayers of black phosphorus, according to Imec (Leuven, Belgium). Researchers from the nonprofit semiconductor research institute described their findings at the annual Imec Technology Forum, held in San Francisco on the eve of Semicon West (July 11-13).

Imec's demonstration project focused on field-effect transistors for high-performance logic applications as part of its Core CMOS program. Using co-optimization at the material, device, and circuit levels, Imec and its collaborators proved the concept using 2-D monolayers of anisotropic black phosphorus with a smaller effective mass in the transport direction. The black phosphorus was sandwiched between interfacial layers of low-k dielectric, with stacked dual gates deployed atop high-k dielectric.

Four Technologies For Industry 4.0

The challenge of merging IT with OT domains is to assemble in one place four requisite industrial IoT technologies: networking, processing, user interface, and security.

Under a transformation known as Industry 4.0, savvy manufacturers are busy conceiving and creating the intelligent industrial enterprise of the future. By merging their information technology (IT) and operational technology (OT) domains, they're building next-generation smart systems to optimize manufacturability, improve operations, enhance customer support, and analyze real-time data provided by the Industrial Internet of Things (IIoT). The IIoT concept, in its most reduced form, is about connecting embedded systems to the broader world. More broadly, it encompasses data analysis (often in the cloud), human interaction, and security