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Google Set To Launch Branded Smartphones

Google will this week launch the first smartphones that carry its own brand and design, as part of a batch of new devices aimed at competing in markets with Apple and Amazon.

The new gadgets, which will include a voice-responsive "smart speaker" modelled on Amazon's Echo, are the first products of a new hardware division set up earlier this year.

Google has in the past mainly developed hardware to show off its software and services and to encourage other consumer tech companies to create a mass market for the technology. But like Microsoft, whose Surface has become the leading product in a new category of tablet/laptop hybrids, Google has been drawn deeper into developing its own distinctive products.

Iris, Facial Recognition May Obsolete Passwords

FotoNation, a subsidiary of US-based Tessera Technologies Inc., claims that its suite of biometrics recognition algorithms can eliminate the need for smartphone passwords with face- and iris-recognition.

FotoNation has long been licensing the "red eye" reduction algorithms used by Nikon and nearly every other camera and smartphone maker making it a no-brainer that they will adopt the new algorithms, according to general manager of FotoNation, Sumat Mehra. At first their algorithms ran as software on the host application processor, but now the company has created its own hardware accelerator IP that can be licensed to reduce processing time to 100ms and makes its impervious to hackers, according to Mehra. By 2014, its algorithms were being run on 60% of smartphones, and in 2015 it acquired the Mirlin biometric IP for iris recognition, which likewise tracks an individual's facial features.

TSMC Builds Up R&D Capacity For 3nm

Taiwan Semiconductor Manufacturing Co. Ltd (TSMC) is planning to actively develop the 5nm process technology, while dedicating anywhere between 300 and 400 R&D personnel in developing a 3nm process, which it intends to ultimately push down further to 1nm, according to a local publication, CTimes.

In an interview, Dr. Mark Liu, President and Co-CEO of TSMC, said that the company will use its 3D stacked architecture to break the limitation of Moore's law and move toward the 3nm manufacturing node.

Liu stressed that TSMC has established the complete ecosystems with the intellectual property, automation solutions and equipment providers, and will continue to invest in technology development and research, and to make Taiwan become the strongest fortress in the global semiconductor industry.

Ethernet Flexes Network Muscles

SANTA CLARA, Calif. — A new generation of Ethernet silicon is in the works that could help further spread use — especially in optical backbone networks — of the already widely adopted networking technology. Flexible Ethernet enables chips that can dial in different data rates as needed.

A preliminary spec for Flexible Ethernet at 100 Gbits/second rates was formally set by the Optical Internetworking Forum earlier this year. The OIF will fill in that spec with more details and support for 25G, 200G and 400G rates in a 2.0 effort expected to start in November.

Carmakers, Telecom Players Join Forces on 5G

MUNICH—In a cross-industry alliance, Audi, BMW and Daimler along with telecommunications equipment providers Ericsson, Huawei and Nokia as well as semiconductor vendors Intel and Qualcomm will bundle their R&D resources to evolve, test and promote communications solutions for connected mobility. The efforts will focus on the development of 5G mobile technologies.

The "5G Automotive Association" announced to develop, test and promote communications solutions, support standardization and accelerate the commercial availability of such solutions.