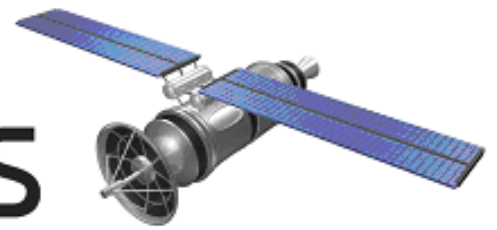


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Applied's Tungsten Process Fights Resistance

Applied Materials has formally introduced its new Endura Volta Selective Tungsten CVD system that enables makers of semiconductors to selectively deposit tungsten in the transistor contact vias to reduce their resistance and increase transistor's performance and cut its power consumption.

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Edging Towards a 5G Future: Mobile Edge Computing

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Ford Goes All in with Mobileye in ADAS

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TALK TO US



Tiny Alchip Uses AI Strength to Win 7nm Capacity from TSMC

TAIPEI — Alchip Technologies is using its AI and high performance computing strength as a chip design house to win capacity from Taiwan Semiconductor Manufacturing Co. (TSMC) at the most advanced 7nm and 5nm nodes.

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Nvidia, Google Both Claim MLPerf Training Crown

The third round of MLPerf training benchmark scores for eight different AI models are out, with rivals Nvidia and Google both staking a claim to the crown. While both companies claimed victory, the results bear further scrutiny. Scores are based on systems, not individual accelerator chips.

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Applied's Tungsten Process Fights Resistance

Applied Materials has formally introduced its new Endura Volta Selective Tungsten CVD system that enables makers of semiconductors to selectively deposit tungsten in the transistor contact vias to reduce their resistance and increase transistor's performance and cut its power consumption. Reduction of contacts' resistance is crucial for modern and upcoming nodes that further shrink dimensions of transistors as well as contacts. The new tool, which is already in use by major makers of chips, promises to enable power, performance, and area for several upcoming generations of process technologies.

Recent advances in production of semiconductors, such as multi patterning and extreme ultraviolet (EUV) lithography, have enabled chipmakers to shrink transistor sizes, increase their performance, and cut their power. These methods are set to enable further performance, power, and area (PPA) scaling for at least a decade. Along with transistor sizes, advances in lithography have shrunk dimensions of transistor contacts too, but tinier contacts mean higher resistance.

Edging Towards a 5G Future: Mobile Edge Computing

Two organizations that have been working on the development of Multi-Access Edge Computing (MEC) in the mobile space are expected to announce early next month specifications for the technology.

One is the '5G Future Forum', an operator-led group that came together in January, that includes Verizon, Vodafone (Europe), Telstra (Australia), America Movil (Latin America), Rogers (Canada) and South Korean carrier KT.

The other is the European Telecommunications Standards Institute (ETSI) that established an MEC initiative back in 2014, betting that the technology represents a key architectural concept capable of enabling the evolution of 5G.

It is now becoming clear that MEC can indeed play a significant role in reducing latency in 5G networks. It will also shift and spread the load of cloud computing to reduce congestion in mobile networks by bringing data closer to the end user and streaming it more directly to mobile phones and tablets.

Ford Goes All In with Mobileye In ADAS

Ford Motor Company and Mobileye, an Intel Company, have announced an expansion of their partnership, with plans to integrate improved advanced driver-assistance systems (ADAS) across Ford's global product lineup.

Ford and Mobileye are no strangers. This represents Ford's first commitment to Mobileye's technology "for the entire lifecycle of its next-generation vehicles" however, according to the companies. "Both parties will work with designated Ford Tier 1 providers to supply the technology for vehicle integration."

A big win for Mobileye

Egil Juliussen, an independent automotive industry analyst, called the announcement "a big win for Mobileye."

"Ford has long used Mobileye hardware," noted Intel's spokesperson, but with this announcement, Ford "is expanding both volume and scope."

Tiny Alchip Uses AI Strength to Win 7nm Capacity from TSMC

TAIPEI — Alchip Technologies is using its AI and high performance computing strength as a chip design house to win capacity from Taiwan Semiconductor Manufacturing Co. (TSMC) at the most advanced 7nm and 5nm nodes.

Competing with better-known TSMC customers such as Apple, AMD, Qualcomm, MediaTek and NXP, tiny Alchip has gained allocation at leading nodes from the world's largest foundry because TSMC sees business potential in the full-reticle size devices that the tiny company designs featuring gate counts in the billions.

Alchip, which counts some of its earliest customers in China, has more recently been expanding sales to U.S. fabless and systems makers.

Nvidia, Google Both Claim MLPerf Training Crown

The third round of MLPerf training benchmark scores for eight different AI models are out, with rivals Nvidia and Google both staking a claim to the crown.

While both companies claimed victory, the results bear further scrutiny. Scores are based on systems, not individual accelerator chips. While Nvidia swept the board for commercially available systems with its Ampere A100-based supercomputer, Google's massive TPU v3 system and smaller TPU v4 systems, which it entered under the research category, makes the search giant a strong contender.