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NEC and Analog Devices Enable 5G O-RAN

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Sometimes having an idea isn't enough. Sometimes a small company needs a boost to bring its product to those that need it most.

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TALK TO US

Elektrobit Aims to Reduce Car OEMs' Software Dev Burden

Ever since Tesla showed the way to improve features of an entire vehicle via over-the-air software updates, traditional car OEMs started claiming that they, too, are ramping up software development efforts to design "software-defined vehicles.

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Neuromorphic Startup Targets Applications Beyond Cameras

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NEC and Analog Devices Enable 5G O-RAN for the Next Communication

Analog Devices Inc. (ADI) and NEC are collaborating to provide 5G O-RAN massive MIMO radio for Rakuten Mobile. ADI's fourth-generation software-defined radio is designed to support wireless applications such as massive MIMO and small cell systems, simplifying design and lowering power consumption. The radio unit has a 5G open vRAN (virtual RAN) interface corresponding to Rakuten Mobile's virtualized end-to-end native cloud mobile network. The system performs digital pre-distortion in addition to digital beamforming.

In an interview with EE Times, Joe Barry, VP of Wireless at ADI, said, "Rollouts are progressing from coverage to capacity deployments with standalone 5G functionality, and we're seeing the potential of virtualization of the networks.

Neuromorphic Startup Raises for Brain-Inspired Computing Architecture

Innatera, a spin-out from the Delft University of Technology, is developing an analog chip designed to run spiking neural networks, a type of neural network often used in neuromorphic computing that is inspired by the way the brain works. Like other neuromorphic computing approaches, the benefits are dramatic improvements in power consumption and latency – Innatera claims its chip will allow sensor data to be processed 100x faster and with 500x less energy than using conventional digital processing.

Innatera CEO Sumeet Kumar told EE Times that the company is targeting the sensor-edge, that is, applications inside or very close to the sensor, where processing is always-on and power budgets are tight.

"A number of [neuromorphic] companies target cameras and vision applications today, however, neuromorphic compute has a far wider application scope across sensing: microphones, radars, lidars, ultrasonic," Kumar said. "There is vast potential for value addition in sensing in general, and we're working in many of these areas with solutions that outperform conventional implementations."

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That's what happened to Smart Gladiator LLC, a manufacturer of wearable scanning technology, based in Atlanta. Puga Sankara founded the company after he saw the need to improve the process of how companies were tracking their inventory.

"Workers need a user-friendly, comfortable way, to track products in the distribution centers," says Sankara. "With the volume coming through these centers and workers having to lug around heavy components that disrupted their workflow, wearables offer a great solution."

Elektrobit Aims to Reduce Car OEMs' Software Dev Burden

Ever since Tesla showed the way to improve features of an entire vehicle via over-the-air software updates, traditional car OEMs started claiming that they, too, are ramping up software development efforts to design "software-defined vehicles."

However, as The Essex once sang, "it's easier said than done."

While software-centric vehicles make a good talking point for automakers' shareholders, the idea of actually building and maintaining a huge in-house software team is more pipe dream than in-the-pipeline — especially for automakers whose forte is not exactly in writing tens of millions of lines of code.

Neuromorphic Startup Targets Applications Beyond Cameras

Dutch neuromorphic computing startup Innatera Nanosystems has completed a seed funding round, raising €5 million (around $6 million).

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