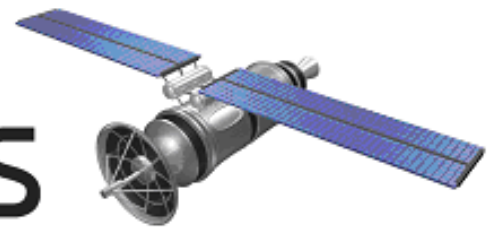


# FutureHorizons



The Global Semiconductor Industry Analysts

## FH MONDAY

26 October 2020

### Wireless Battery Management System for Future EVs

General Motors (GM) will use a wireless battery management system (WBMS) in its electric vehicles (EVs). The system was developed together with Analog Devices and should be the main driver to power other solutions in e-mobility.

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### Slow and Steady Wins the 3D Printing Race

A fuel nozzle from GE that will revolutionize aviation, thanks to a partnership between GE and the US Air Force. Beautiful ceramics that rival fine art found in any museum across the globe.

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### Qualcomm and Reliance Jio Aliance Efforts on 5G

Qualcomm Technologies, Inc. and Reliance Jio Platforms (Jio) along with its wholly owned subsidiary Radisys Corporation today announced their expanded efforts to develop open and interoperable interface compliant architecture based 5G solutions with a virtualized RAN.

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### TALK TO US



### CEA-Leti CEO Sees Bright Future for Hardware

In the opening keynote of the recent Leti Innovation Days, Emmanuel Sabonnadière, CEO of CEA-Leti, described Leti's commitments and actions for a world dramatically altered by Covid-19 pandemic. Not only is hardware making a comeback, but it is a game changer.

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### EVENTS

#### [Silicon Chip Industry Seminar](#)

-9 November 2020- London UK

#### [Industry Forecast Briefing](#)

- 12 January 2021- London UK

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### Neuromorphic Sensor Fusion Lets Robots Grip

Researchers at the National University of Singapore recently demonstrated the advantages of using neuromorphic sensor fusion to help robots grip and identify objects.

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## **Wireless Battery Management System for Future EVs**

General Motors (GM) will use a wireless battery management system (wBMS) in its electric vehicles (EVs). The system was developed together with Analog Devices and should be the main driver to power other solutions in e-mobility.

Many market analysts identify the wireless battery management system as one of the key enablers for the wider deployment of electric vehicles, helping auto OEMs avoid the need to redesign complex wiring diagrams for each new vehicle and helping to ensure battery scalability. A robust, reliable and secure system that works well and is protected with the latest IT security measures is critical.

The wBMS can be wirelessly upgraded with new software-based functionality through GM's over the air Vehicle Intelligence Platform. The wireless system is used for data and diagnostic needs with all the required FCC and CCC certifications to ensure compatibility and cybersecurity provisions to protect our customers' vehicles from outside tampering.

## **Slow and Steady Wins the 3D Printing Race**

A fuel nozzle from GE that will revolutionize aviation, thanks to a partnership between GE and the US Air Force. Beautiful ceramics that rival fine art found in any museum across the globe. Gourmet food items; homes created in less than a day for a fraction of traditional costs that could help stop the housing crisis.

3D printing wields power and creates opportunities. And for companies working in the manufacturing of goods, it brings added value and the potential for exponential growth. It can boost productivity, expand reach and serve as a force of immense creative energy and business expansion.

## **Qualcomm And Reliance Jio Align Efforts On 5G**

Qualcomm Technologies, Inc. and Reliance Jio Platforms (Jio) along with its wholly owned subsidiary Radisys Corporation today announced their expanded efforts to develop open and interoperable interface compliant architecture based 5G solutions with a virtualized RAN. This work is intended to fast track the development and roll out of indigenous 5G network infrastructure and services in India.

Qualcomm Technologies and Jio also announced that they achieved over a 1 Gbps milestone on the Reliance Jio 5G NR software, leveraging the Qualcomm® 5G RAN Platforms. This achievement not only supports Jio's 5G credentials but also signifies the entry of Jio and India into the Gigabit 5G NR product portfolio.

## **CEA-Leti CEO Sees Bright Future for Hardware**

In the opening keynote of the recent Leti Innovation Days, Emmanuel Sabonnadière, CEO of CEA-Leti, described Leti's commitments and actions for a world dramatically altered by Covid-19 pandemic. Not only is hardware making a comeback, but it is a game changer.

The year 2020 is like no other. The Covid-19 outbreak has brought several technology developments overnight. Overall, the electronics industry has demonstrated resilience and adaptability to develop new solutions that could curb the spread of the virus. From the early days of the pandemic, CEA-Leti mobilized its resources. For instance, in March, CEA-Leti launched the Arise (AiR monitoring riSk arEa) project whose goal is to produce an air analyzer equipped with detection capabilities for the ubiquitous monitoring of SARS-CoV-2 pathogens in airborne droplets or aerosols in confined environments. In July, Leti and IAB (Institute for Advanced Biosciences) announced they had started working on a Covid-19 vaccine. The principle is based on the production of small drops of lipids, natural fatty substances, on which virus constituents can be associated and thus be taken over by the body's immune cells that capture microorganisms: dendritic cells. Thus charged, these cells are capable of initiating immune responses, such as the production of antibodies.

## **Neuromorphic Sensor Fusion Lets Robots Grip, Identify Objects**

Researchers at the National University of Singapore recently demonstrated the advantages of using neuromorphic sensor fusion to help robots grip and identify objects.

It's just one of a number of interesting projects they've been working on including developing a new protocol for transmitting tactile data, building a neuromorphic tactile fingertip, and developing new visual-tactile datasets for the development of better learning systems.

Because the technology uses address-events and spiking neural networks it is extremely power efficient: 50 times more using one of the Intel Loihi neuromorphic chips than a GPU. However, what's particularly elegant about this work is that it points the way towards neuromorphic technology as a means of efficiently integrating — and extracting meaning from — many different sensors for complex tasks in power-constrained systems