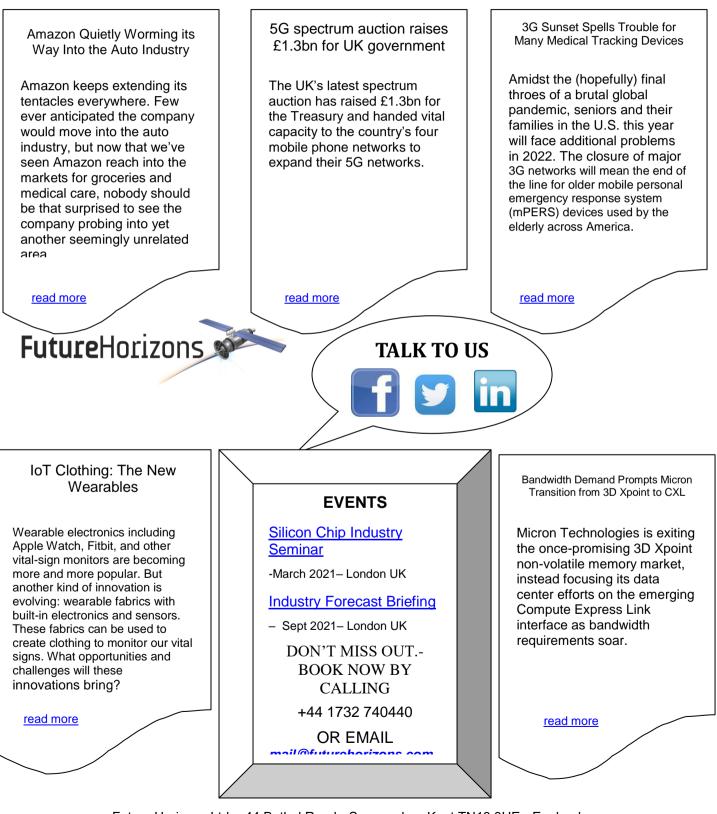
FutureHorizons

The Global Semiconductor Industry Analysts

FH MONDAY

22 March 2021



Future Horizons Ltd, • 44 Bethel Road • Sevenoaks • Kent TN13 3UE • England Tel: +44 1732 740440 • Fax: +44 1732 740442 e-mail: <u>mail@futurehorizons.com</u>• <u>http://www.futurehorizons.com/</u> Affiliates in Europe, India, Israel, Japan, Russian, San Jose California, USA

Amazon Quietly Worming its Way Into the Auto Industry

Amazon keeps extending its tentacles everywhere. Few ever anticipated the company would move into the auto industry, but now that we've seen Amazon reach into the markets for groceries and medical care, nobody should be that surprised to see the company probing into yet another seemingly unrelated area. Much of Amazon's activity in the automotive arena isn't readily apparent, nor is its growing influence in the automotive market, which is a good reason to write this column.

Amazon is quite unique in its strategy and long-term thinking (other companies could learn much from Amazon). Amazon is participating in the automotive and transport industry in multiple ways:

5G Spectrum Auction Raises £1.3bn For UK Government

The UK's latest spectrum auction has raised £1.3bn for the Treasury and handed vital capacity to the country's four mobile phone networks to expand their 5G networks.

Ofcom, the telecoms regulator, on Wednesday revealed the results of its latest auction, which had lasted less than a week. A previous 5G sale in 2018 also raised £1.35bn.

BT, which owns EE, and Telefónica's O2 were the biggest spenders in the latest 5G sale as both companies spent around £450m to boost their spectrum positions. The groups acquired spectrum in the lower 700Mhz band and higher 3.6-3.8 Ghz frequencies.

3G Sunset Spells Trouble for Many Medical Tracking Devices

Amidst the (hopefully) final throes of a brutal global pandemic, seniors and their families in the U.S. this year will face additional problems in 2022. The closure of major 3G networks will mean the end of the line for older mobile personal emergency response system (mPERS) devices used by the elderly across America.

Hundreds of thousands of these vital medical tracking devices will be rendered inoperable by the 3G shutdown, leaving elderly users and caregivers scrambling to switch to 4G and Wi-Fi-based devices. The upgrade cost, at least \$150, comes at a time of great economic hardship for many ordinary folk.

IoT Clothing: The New Wearables

Wearable electronics including Apple Watch, Fitbit, and other vital-sign monitors are becoming more and more popular. But another kind of innovation is evolving: wearable fabrics with built-in electronics and sensors. These fabrics can be used to create clothing to monitor our vital signs. What opportunities and challenges will these innovations bring?

Why wearables?

As the internet of things continues to grow exponentially, wearables have emerged as the latest IoT frontier because of their enticing potential applications. Wearables' benefits include convenience, ease of use, and real-time service. However, there are also daunting design and development challenges to overcome if we are serious about expanding beyond the current applications.

Bandwidth Demand Prompts Micron Transition from 3D Xpoint to CXL

Micron Technologies is exiting the once-promising 3D Xpoint non-volatile memory market, instead focusing its data center efforts on the emerging Compute Express Link interface as bandwidth requirements soar.

Sanjay Mehrotra, Micron's president and CEO, said this week the memory maker would cease 3D Xpoint development and "reprioritize our R&D investments" toward new memory products based on Compute Express Link (CXL), the emerging CPU-memory industry standard interface.

"Our decision was driven by our assessment of the 3D XPoint market opportunity in light of the expected impact of CXL and our new emerging memory products, on the future data center," Mehrotra said.

Micron is currently in discussions with "several potential buyers" of its dedicated 3D Xpoint fab in Lehi, Utah. It hopes to complete a sale later this year, Mehrotra added. The Lehi fab led Micron's entry into the NAND market the early 2000s, later bringing Micron's version of 3D Xpoint memory technology into mass production.