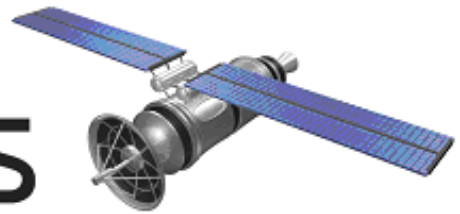# FutureHorizons
The Global Semiconductor Industry Analysts

FH MONDAY

11 September 2017

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SAN JOSE, Calif. — The race is on to deliver some form of 5G as soon as possible. An Intel executive painted apicture of engineers pushing the pedal to the metal to complete an early version of the 5G New Radio (NR) standard by the end of the year

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TALK TO US

ST, MediaTek Enter NFC Partnership

TAIPEI — STMicroelectronics has said that it will integrate its contactless NFC technology with MediaTek's silicon, allowing smartphone makers to design handsets supporting mobile services, including payments and other online transactions.

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3D Face Recognition is Here

Mobile device makers are eyeing 3D cameras to power augmented reality apps and security via 3D face recognition.With several major mobile device makers expected to include 3D imaging technology in their next-generation smartphones

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Facebook Shows Smartphone AI

SAN JOSE, Calif. — Facebook is using OpenGL to deploy to smartphones' visual effects created with machine learning. The open API is delivering solid performance across iOS and Android phones; however, a lead developer called for a move to more modern Vulkan or Metal APIs to ease mobile graphics programming.

That was one of several news nuggets from @Scale, the social network's event targeting software engineers. In other developments, an exhibitor showed a copper alternative to solder, a startup demoed its 16-lens camera, and an academic described progress using DNA for computer storage.

Facebook runs the event in various cities to spawn a collaborative ecosystem using open-source software to solve some of the biggest issues plaguing big data centers.

GE Venture, Nvidia Bond over Inspection AI

MADISON, Wis. — The movers and shakers in a host of different industrial sectors are awakening to the looming impact of artificial intelligence. Few companies, however, have solid strategies to cope with the way their business will change, nor do most have a clear idea about when and how to implement AI, and with whom to partner to make it happen.

Avitas Systems, a GE Venture, and Nvidia are taking steps to bring some clarity to the use of AI in the industrial sector. The companies announced Thursday (Sept. 7) a partnership to work together enabling AI in inspection services for the oil, gas and transportation industries.

Nvidia posted in its latest blog, "How do you send a human being to inspect a petroleum refinery flare stack — one that operates at hundreds of degrees and requires negotiating a high-risk vertical climb? The answer is you don't."

3GPP Burns Midnight Oil for 5G

SAN JOSE, Calif. — The race is on to deliver some form of 5G as soon as possible.

An Intel executive painted a picture of engineers pushing the pedal to the metal to complete an early version of the 5G New Radio (NR) standard by the end of the year. She promised that Intel will have a test system based on its x86 processors and FPGAs as soon as the spec is finished.

The 3GPP group defining the 5G NR has set a priority of finishing a spec for a non-standalone version by the end of the year. It will extend existing LTE core networks with a 5G NR front end for services such as fixed-wireless access.

ST, MediaTek Enter NFC Partnership

TAIPEI — STMicroelectronics has said that it will integrate its contactless NFC technology with MediaTek's silicon, allowing smartphone makers to design handsets supporting mobile services, including payments and other online transactions.

By integrating ST's NFC chipset with MediaTek's SoCs, the partners aim to help mobile OEMs overcome technical challenges such as antenna design, integration, and miniaturization while cutting bill-of-material costs and enabling interoperability with payment terminals at retailers and transportation hubs.

3D Face Recognition is Here

Mobile device makers are eyeing 3D cameras to power augmented reality apps and security via 3D face recognition.

With several major mobile device makers expected to include 3D imaging technology in their next-generation smartphones, it's a good time to contemplate the potential applications of this technology.

Imagine a realtor being able to film and distribute an immersive 3D tour of a home for her clients to explore, or Dad finally having the ability to capture and share your family trips in exhaustive 3D glory. Imagine video games that integrate real terrain with computer generated characters and effects that realistically interact with their environment.

There are several different commercially available techniques for providing z-axis or depth information. They include traditional stereo cameras with two lenses, as well as more advanced approaches using structured light or time-of-flight. Each has its own strengths and weakness, including the physical size of the module, accuracy of the depth information, the ability to provide depth information in different lighting conditions, and of course cost.