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Movidius Announces Deep Learning Accelerator and Fathom Software Framework

New tools to bring powerful real-time neural network applications to devices in 2016

SAN MATEO, California – April 28th, 2016 – Movidius, the leader in low-power machine vision technology, today announced both the Fathom Neural Compute Stick – the world’s first deep learning acceleration module, and Fathom deep learning software framework. Both tools hand-in-hand will allow powerful neural networks to be moved out of the cloud, and deployed natively in end-user devices.

The new Fathom Neural Compute Stick is the world’s first embedded neural network accelerator. With the company’s ultra-low power, high performance Myriad 2 processor inside, the Fathom Neural Compute Stick can run fully-trained neural networks at under 1 Watt of power. Thanks to standard USB connectivity, the Fathom Neural Compute Stick can be connected to a range of devices and enhance their neural compute capabilities by orders of magnitude.

Neural Networks are used in many revolutionary applications such as object recognition, natural speech understanding, and autonomous navigation for cars. Rather than engineers programming explicit rules for machines to follow, vast amounts of data are processed offline in self-teaching systems that generate their own rulesets. Neural networks significantly outperform traditional approaches in tasks such as language comprehension, image recognition and pattern detection.

When connected to a PC, the Fathom Neural Compute Stick behaves as a neural network profiling and evaluation tool, meaning companies will be able to prototype faster and more efficiently, reducing time to market for products requiring cutting edge artificial intelligence.

“As a participant in the deep learning ecosystem, I have been hoping for a long time that something like Fathom would become available,” said Founding Director of New York University Data Science Center, Dr. Yann LeCun. “The Fathom Neural Compute Stick is a compact, low-power convolutional net accelerator for embedded applications that is quite unique. As a tinkerer and builder of various robots and flying contraptions, I’ve been dreaming of getting my hands on something like the Fathom Neural Compute Stick for a long time. With Fathom, every robot, big and small, can now have state-of-the-art vision capabilities.”

Fathom allows developers to take their trained neural networks out of the PC-training phase and automatically deploy a low-power optimized version to devices containing a Myriad 2 processor. Fathom supports the major deep learning frameworks in use today, including Caffe and TensorFlow.



"Deep learning has tremendous potential -- it's exciting to see this kind of intelligence working directly in the low-power mobile environment of consumer devices" says Pete Warden, lead for Google's TensorFlow mobile team. "With TensorFlow supported from the outset, Fathom goes a long way towards helping tune and run these complex neural networks inside devices."

According to Movidius CEO, Remi El-Ouazzane "It's going to mean that very soon, consumers are going to be introduced to surprisingly smart applications and products. It means the same level of surprise and delight we saw at the beginning of the smartphone revolution; we're going to see again with the machine intelligence revolution. With more than 1 million units of Myriad 2 already ordered, we want to make our VPU the de-facto standard when it comes to embedded deep neural network."

Fathom will be shown in public for the first time at the Embedded Vision Summit in Santa Clara, California on May 2-4. Learn more at: <http://www.embedded-vision.com/summit>

Fathom and the Myriad 2 family of processors are available today to qualified customers. Learn more at [www. Movidius.com](http://www.Movidius.com)

About Movidius

Movidius is the leader in high performance, ultra-low power computer vision technology for connected devices. By marrying sophisticated software algorithms to a powerful, purpose-built Vision Processing Unit (VPU), Movidius brings new levels of visual intelligence to smart devices. Movidius' dedicated machine vision solutions enable a new wave of intelligent and contextually aware devices including drones and AR/VR devices. With offices in Silicon Valley, Ireland, Romania and China, Movidius is a venture-backed company with investors including Atlantic Bridge Capital, Draper Esprit, Robert Bosch Venture Capital, and Summit Bridge Capital.

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