

ASX Announcement

BrainChip Patent US11,151,441 for "Spontaneous Machine Learning and Feature Extraction" granted

- Patent US 11,151,441 "System and Method for Spontaneous Machine Learning and Feature Extraction" is the fifth foundational patent awarded to BrainChip
- IP security remains a strong focus for preserving our global competitive advantage

Sydney – 21 October 2021: BrainChip Holdings Ltd (ASX:BRN, OTCQX: BRCHF), the world's first commercial producer of advanced neuromorphic artificial intelligence chips today announced that the US Patents and Trademarks Office has granted a US patent for spontaneous machine learning and feature extraction.

BrainChip CEO and co-founder Peter van der Made said, "This latest patent is one of five foundational patents we have been granted since 2008 to protect our intellectual property rights and to ensure we maintain our global competitive advantage in the field of neuromorphic artificial intelligence. This patent is intended to protect the unique ability of the Akida chip to learn in real time, rather than being trained with many samples. As the world's first commercial producer of neuromorphic artificial intelligence chips (Akida1000), we must maintain our lead over our competitors by ensuring our unique and revolutionary technology is protected and secure."

Key features of Patent US 11,151,441

- Embodiments of the present invention provide an artificial neural network system for improved machine learning, feature pattern extraction and output labeling. The system comprises a first spiking neural network and a second spiking neural network.
- The first spiking neural network is configured to spontaneously learn complex, temporally overlapping features arising in an input pattern stream. Competitive learning is implemented as Spike Timing Dependent Plasticity with lateral inhibition in the first spiking neural network.
- The second spiking neural network is connected to the first spiking neural network through dynamic synapses and is trained to interpret and label the output data of the first spiking neural network

Details of the patent can be obtained at https://patft.uspto.gov/netacgi/nph-2
Parent-2 Parent-2
https://patft.uspto.gov/netacgi/nph-2
https://patft.uspto.go



This announcement is authorised for release by the BRN Board of Directors.

About BrainChip Holdings Ltd (ASX:BRN)

BrainChip is a global technology company that is producing a groundbreaking neuromorphic processor that brings artificial intelligence to the edge in a way that is beyond the capabilities of other products. The chip is high performance, small, ultra-low power and enables a wide array of edge capabilities that include on-chip training, learning and inference. The event-based neural network processor is inspired by the spiking nature of the human brain and is implemented in an industry standard digital process. By mimicking brain processing BrainChip has pioneered a processing architecture, called Akida™, which is both scalable and flexible to address the requirements in edge devices. At the edge, sensor inputs are analyzed at the point of acquisition rather than through transmission via the cloud to a data centre. Akida is designed to provide a complete ultra-low power and fast Al Edge Network for vision, audio, olfactory and smart transducer applications. The reduction in system latency provides faster response and a more power efficient system that can reduce the large carbon footprint of data centres.

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