LICENSING OPPORTUNITY: SYSTEM AND METHOD FOR PARAMETER MULTIPLEXED GRADIENT DESCENT

DESCRIPTION

Problem

The existing training method, "backpropagation," is difficult to implement in hardware and becomes untenable when the hardware is imperfect.

Invention

Parameter multiplexed gradient descent (PMGD) is a machine learning training method designed to easily train emergent non-volatile memory and neuromorphic hardware platforms.

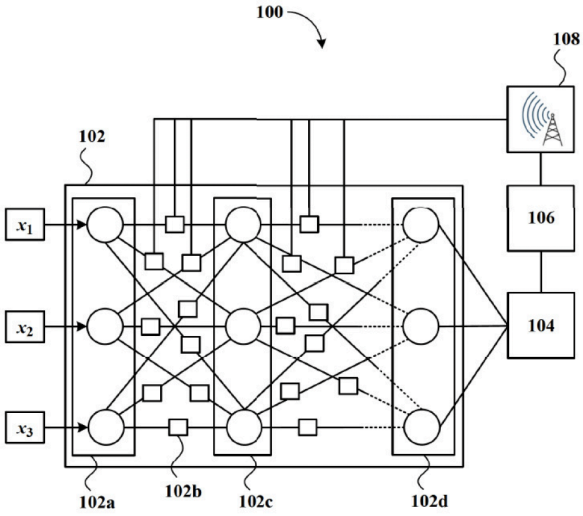
BENEFITS

Potential Commercial Applications

Online training of both analog and digital systems. Useful for in-the-field training of custom machine learning and neuromorphic hardware.

Competitive Advantage

Hardware networks can be trained much faster and use less energy than current equivalent techniques. It is also robust to hardware imperfections and noise.



The figure illustrates a system for parameter multiplexed gradient descent in accordance with embodiments of the present invention.

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