IBM Newsroom

Honda and IBM Sign Memorandum of Understanding to Explore Long-term Joint Research and Development of Semiconductor Chip and Software Technologies for Future Software-Defined Vehicles

Agreement outlines intent to research and develop solutions to new challenges related to processing performance, power consumption, and design complexity

TOKYO, Japan, May 15, 2024/ARMONK, N.Y., U.S.A, May 14, 2024 – IBM (NYSE:IBM) and Honda Motor Co., Ltd. (Honda) today announced they have signed a Memorandum of Understanding (MOU) outlining their intent to collaborate on the long-term joint research and development of next-generation computing technologies[*1] needed to overcome challenges related to processing capability, power consumption, and design complexity for the realization of the software-defined vehicles (SDV) of the future.

The application of intelligence/AI technologies is expected to accelerate widely in 2030 and beyond, creating new opportunities for the development of SDVs. Honda and IBM anticipate that SDVs will dramatically increase the design complexity, processing performance, and corresponding power consumption of semiconductors compared to conventional mobility products. In order to solve anticipated challenges and realize highly-competitive SDVs, it is critical to develop capabilities in the independent research and development of next-generation computing technologies. Based on this understanding, the two companies began considering long-term joint research and development opportunities.

In particular, the MOU outlines areas of potential joint research of specialized semiconductor technologies such as brain-inspired computing[*2] and chiplet technologies, with the aim to dramatically improve processing performance while, simultaneously, decreasing power consumption. Hardware and software co-optimization is important to ensure high performance and fast time to market. To achieve such benefits and manage design complexity for future SDVs, the two companies also plan to explore open and flexible software solutions.

Through this collaboration, the two companies would strive to realize SDVs that feature the world's top-level computing and power saving performance.

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**1 Computing technology being developed with an aim to achieve both high processing performance and low power consumption in the 2030s and beyond.*

**2 Computer architecture and algorithms that mimic the brain's structure and function while optimizing for silicon.*
