

Title (en)

AN APPARATUS AND METHOD FOR PERFORMING ENHANCED POINTER CHASING PREFETCHER

Title (de)

VORRICHTUNG UND VERFAHREN ZUR DURCHFÜHRUNG EINES VERBESSERTEN ZEIGERVERFOLGUNG-PREFETCHERS

Title (fr)

APPAREIL ET PROCÉDÉ DE MISE EN OEUVRE DE PRÉEXTRACTION DE POURSUITE DE POINTEUR AMÉLIORÉE

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2022171309A1] An apparatus and methods for performing enhanced pointer chasing prefetch are disclosed. The method includes detecting during an execution of a program a pointer load, which is a load instruction of one or more elements in a data structure wherein returned data of the load instruction from a memory contains one or more pointers, for another load instruction. Mapping the pointer load to: a data structure type, one or more offsets of the one or more pointers in the data structure, and the data structure types the one or more pointers point to, for dispatching a prefetch from the cache layer to the memory; and recursively dispatch prefetches after data of a pointer load or a previous prefetch returns from the memory, based on the offsets of pointers within each data structure type which the pointer is mapped to, before the pointer load is executed by the processor.

IPC 8 full level

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CPC (source: EP)

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