Title (en)
METHOD FOR OPERATING A MULTICORE PROCESSOR

Title (de)
VERFAHREN ZUM BETRIEB EINES MEHRKERNPROZESSORS

Title (fr)
PROCÉDÉ DE FONCTIONNEMENT D'UN PROCESSEUR MULTICOEUR

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Application
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Abstract (en)
[origin: WO2017080793A2] According to the invention, at least two processor cores of a multicore processor are used for dual-lane computing of a security-critical application. The two processor cores are used to full capacity in different working cycles for computing operations of different applications, rather than computing operations being redundantly carried out by both processor cores in each computing cycle. This advantageously avoids duplication of the computational capacity required. For the processor cores to monitor each other, the computing operations are alternately carried out by the two processor cores. Any errors can be avoided by the error detection mechanisms described. Although the quality of the error detection according to the invention is somewhat lower than the "dual-lane operation" known from the prior art with parallel, redundant multi-lane calculations, the quality of the error detection can satisfy the requirement of lower computational outlay, in particular when an economic implementation of the control system is required. The invention therefore combines the requirements of a sufficiently secure error detection with an economic distribution of the computational capacity.

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