Title (en)

EXCEPTION HANDLING METHOD AND APPARATUS FOR USE IN PROGRAM CODE CONVERSION

Title (de)

AUSNAHMEBEHANDLUNGSVERFAHREN UND GERÄT ZUR VERWENDUNG BEI PROGRAMMKODEUMWANDLUNG

Title (fr)

PROCEDE ET DISPOSITIF DE TRAITEMENT DES EXCEPTIONS UTILISABLES EN CONVERSION DE CODE DE PROGRAMME

Publication

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Application

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Abstract (en)

[origin: WO0065440A2] A method of handling exceptions for use in an emulator (20) performing program code conversion. Registers (X) of a subject machine (11) being emulated (20) are represented by a pair of abstract registers (XA, XB) on the target machine (31), suitably using memory locations of the target machine and/or any available target registers. One of the pair (e.g., Reg XA) holds a definitive value at entry into a section (100) of subject code (10) whilst the other (e.g., Reg XB) holds a speculative value which is updated during translation and execution of that section of code. Exceptions are handled by recovering the conditions of the virtual subject machine (11) upon entry into the section of subject code (100) using the definitive version of each abstract register (i.e., Reg XA). Advantageously, the function of the pair of registers (XA, XB) is alternated upon successful completion of each section of subject code (100) such that a definitive version of each register is always available for exception handling whilst avoiding time consuming copy and storing operations.

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