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(71) Applicant *(for all designated States except US)*: **INTERNATIONAL BUSINESS MACHINES CORPORATION** [US/US]; New Orchard Road, Armonk, New York 10504 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **SCHWARZ, Eric, Mark** [US/US]; Ibm Corporation, Mp P310, 2455 South Rd, Poughkeepsie, New York 12601-5400 (US). **YEH, Phil** [US/US]; Ibm Corporation, Intellectual Property Law Department, 2455 South Road, Ms P386, Poughkeepsie, New York 12601 (US). **COWLISHAW, Michael, Frederic** [GB/GB]; Ibm Corporation, Intellectual Property Law Department, 2455 South Road, Ms P386, Poughkeepsie, New York 12601 (US). **MUELLER, Silvia, Melitta** [DE/DE]; IBM Deutschland Research & Development GmbH, Schoenaicher Str. 220, 71032 Boeblingen (DE).

(74) Agent: **ROBERTS, Scott**; IBM United Kingdom Limited, Intellectual Property Law, Hursley Park, Winchester Hampshire SO21 2JN (GB).

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(54) Title: DECIMAL FLOATING-POINT QUANTUM EXCEPTION DETECTION

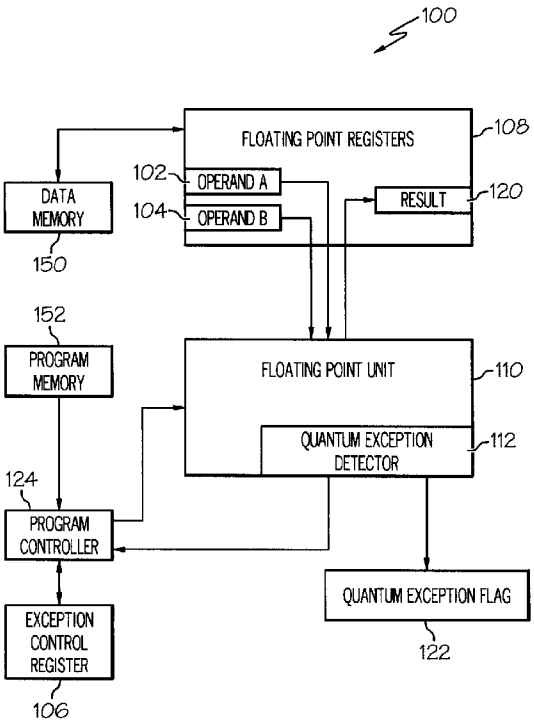

FIG. 1

(57) Abstract: A system and method for detecting decimal floating point data processing exceptions. A processor accepts at least one decimal floating point operand and performs a decimal floating point operation on the at least one decimal floating point operand to produce a decimal floating point result. A determination is made as to whether the decimal floating point result fails to maintain a preferred quantum. The preferred quantum indicates a value represented by a least significant digit of a significand of the decimal floating point result. An output is provided, in response to the determining that the decimal floating point result fails to maintain the preferred quantum, indicating an occurrence of a quantum exception. A maskable exception can be generated that is immediately trapped or later detected to control conditional processing.

WO 2011/147483 A1

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