



- (51) International Patent Classification:
G06F 9/30 (2018.01)
- (21) International Application Number:
PCT/EP2022/066224
- (22) International Filing Date:
14 June 2022 (14.06.2022)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
17/350,418 17 June 2021 (17.06.2021) US
- (71) Applicant: **INTERNATIONAL BUSINESS MACHINES CORPORATION** [US/US]; New Orchard Road, Armonk, New York 10504 (US).
- (71) Applicant (for MG only): **IBM DEUTSCHLAND GMBH** [DE/DE]; IBM-Allee 1, 71139 Ehningen (DE).
- (72) Inventors: **ALBARAKAT, Laith**; c/o IBM Corp., 2455 South Road, Poughkeepsie, New York 12601 (US). **BRADBURY, Jonathan**; c/o IBM Corp., 2455 South Road, Poughkeepsie, New York 12601 (US). **SLEGEL, Timothy**; c/o IBM Corp., 2455 South Road, Poughkeepsie, New York 12601 (US). **LICHTENAU, Cedric**; c/o IBM Deutschland Research & Development GmbH, Schoenaicher Strasse 220, 71032 Boeblingen (DE). **VON BUTTLAR, Joachim**; c/o IBM Deutschland Research & Development GmbH, Schoenaicher Strasse 220, 71032 Boeblingen (DE).
- (74) Agent: **FERARA, Nina**; c/o IBM Deutschland GmbH, Patentwesen und Urheberrecht, IBM-Allee 1, 71139 Ehningen (DE).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

(54) Title: DATA CONVERSION TO/FROM SELECTED DATA TYPE WITH IMPLIED ROUNDING MODE

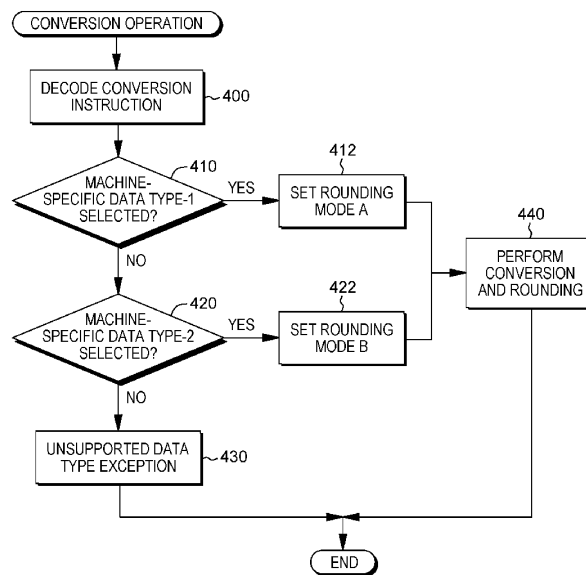


FIG. 4A

(57) Abstract: An instruction to convert data from a source data type to a target data type is obtained. The source data type is selected from one or more source data types supported by the instruction, and the target data type is selected from one or more target data types supported by the instruction. Based on a selected data type of the source data type or the target data type, a determination is made of a rounding mode for use by the instruction. The rounding mode is implicitly set based on the selected data type; it is assigned to the selected data type. A conversion of the data from the source data type to the target data type is performed. The conversion includes performing a rounding operation using the rounding mode implicitly set. The performing the conversion provides a result in the target data type, which is written to a select location.

[Continued on next page]

AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))