



(51) International Patent Classification:
G06F 16/38 (2019.01)

(21) International Application Number:
PCT/IB2021/051531

(22) International Filing Date:
24 February 2021 (24.02.2021)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
16/827,891 24 March 2020 (24.03.2020) US

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

(71) Applicants (*for MG only*): **IBM (CHINA) INVEST-
MENT COMPANY LTD.** [CN/CN]; 25/F, Pangu Plaza,
No. 27, Central North 4th Ring Road, Chaoyang District,
Beijing 100101 (CN). **IBM DEUTSCHLAND GMBH**
[DE/DE]; IBM-Allee 1, 71139 Ehningen (DE).

(72) Inventors: **BUTTERSTEIN, Dennis**; c/o IBM Deutsch-
land Research & Development GmbH, Schoenaicher
Strasse 220, 71032 Boeblingen (DE). **BENKE, Oliver**;
c/o IBM Deutschland Research & Development
GmbH, Schoenaicher Strasse 220, 71032 Boeblingen (DE).
BERGMANN, Tobias; c/o IBM Deutschland Research
& Development GmbH, Schoenaicher Strasse 220, 71032
Boeblingen (DE). **BEIER, Felix**; c/o IBM Deutschland Re-
search & Development GmbH, Schoenaicher Strasse 220,
71032 Boeblingen (DE). **PURCELL, Terence**; c/o IBM
Bloomington, 1615 Commerce Pkwy, Bloomington, Illinois
61704-9608 (US).

(54) Title: OFFLOADING STATISTICS COLLECTION

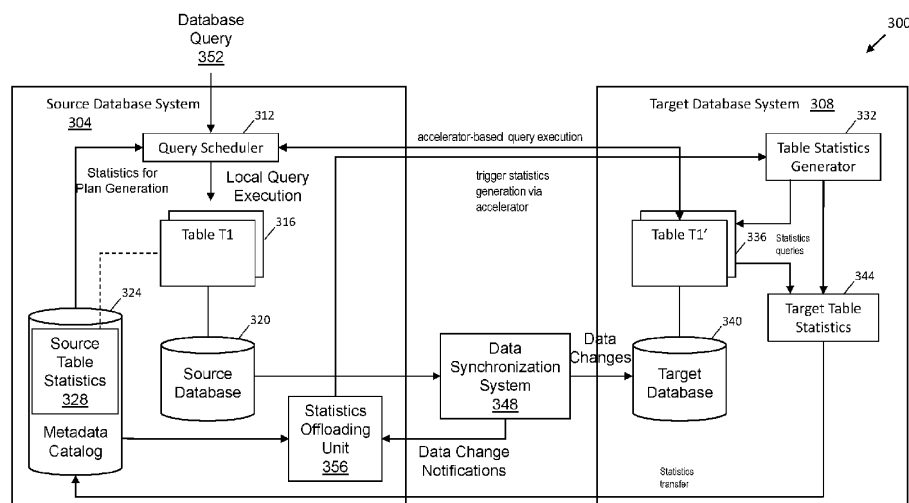


FIG. 3

(57) Abstract: Methods and systems for generating database statistics. Table statistics in a metadata catalog of a source database system are observed, statistics generation costs utilizing a target database system are estimated, and source statistics generation costs utilizing a source database system are estimated. The statistics generation costs are compared and statistics generation queries by the target database system are triggered in response to the statistics generation costs utilizing the target database system having a predefined relationship with the source statistics generation costs utilizing the source database system. The statistics generation queries are performed by the target database system in response to the triggering by the source database system. The generated statistics are sent from the target database system to the source database system, the table statistics in a metadata catalog are updated based on the generated statistics, and the updated table statistics are used to optimize a query plan.

[Continued on next page]

(74) **Agent: VETTER, Svenja;** 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, 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, IR, IS, IT, 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))
- in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE