

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
22 September 2022 (22.09.2022)



(10) International Publication Number
WO 2022/197251 A1

(51) International Patent Classification:

G05B 13/04 (2006.01) G05B 15/00 (2006.01)
F24F 11/30 (2018.01) G06N 3/02 (2006.01)
G05B 17/00 (2006.01) G05D 23/19 (2006.01)

(21) International Application Number:

PCT/SG2022/050146

(22) International Filing Date:

17 March 2022 (17.03.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10202102726W 17 March 2021 (17.03.2021) SG

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(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, 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).

(54) Title: MACHINE LEARNING-BASED PREDICTIVE BUILDING CONTROL SYSTEM AND METHOD

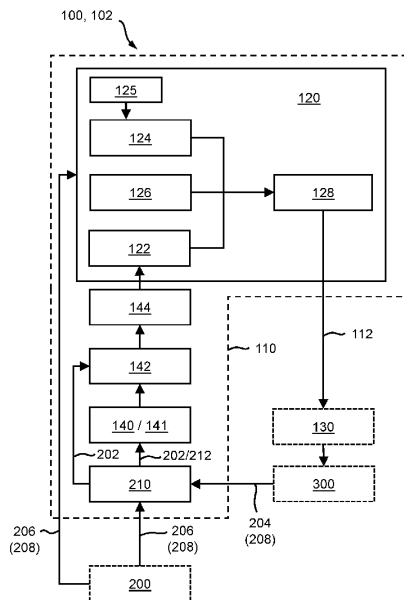


FIG. 2

(57) Abstract: A building control method including: acquiring real-time measurements for a zone, providing a linearized building dynamics model; for a control interval, predictively determining an optimized output from optimizing a cost function based on the linearized building dynamics model; and using the optimized output to control at least one actuator operable in the zone. The cost function is configured to simultaneously optimize two or more objectives, each of the objectives being determined by different types of the measurements acquired for the zone. The optimized output is one of a time series of optimized outputs determined based on the linearized building dynamics model. The optimized output corresponds to a combination of manipulated variables, each of the manipulated variables being configured to control a different one of the at least one actuator.

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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