

Title (en)

AIR-CONDITIONING SYSTEM, MACHINE LEARNING DEVICE, AND MACHINE LEARNING METHOD

Title (de)

KLIMATISIERUNGSSYSTEM, MASCHINENLERNVORRICHTUNG UND MASCHINENLERNVERFAHREN

Title (fr)

SYSTÈME DE CLIMATISATION, ET DISPOSITIF ET PROCÉDÉ D'APPRENTISSAGE AUTOMATIQUE

Publication

EP 3961115 B1 20230712 (EN)

Application

EP 20794580 A 20200417

Priority

- JP 2019086786 A 20190426
- JP 2020016968 W 20200417

Abstract (en)

[origin: EP3961115A1] An air-conditioning system that optimizes operation capacity of an outside air conditioning unit and operation capacity of an air conditioning unit is provided. An air-conditioning system includes an outside air conditioning device, an air conditioning device, and a machine learning apparatus, and includes a state variable acquiring unit configured to acquire state variables including a condition of outside air, a condition of inside air, an operation condition of the outside air conditioning device, an operation condition of the air conditioning device, and a temperature or humidity set for a target space, a learning unit configured to perform learning by associating the state variables with at least either the operating capacity of the outside air conditioning device or the operating capacity of the air conditioning device, and a reward calculating unit configured to calculate a reward that correlates with a total of energy consumption of the outside air conditioning device and energy consumption of the air conditioning device. The learning unit performs the learning by using the reward.

IPC 8 full level

F24F 5/00 (2006.01); **F24F 3/00** (2006.01); **F24F 3/06** (2006.01); **F24F 11/43** (2018.01); **F24F 11/46** (2018.01); **F24F 11/63** (2018.01); **F24F 11/64** (2018.01); **F24F 11/83** (2018.01); **F24F 11/86** (2018.01); **F24F 110/10** (2018.01); **F24F 110/12** (2018.01); **F24F 110/20** (2018.01); **F24F 110/22** (2018.01); **F24F 110/32** (2018.01); **F24F 140/20** (2018.01); **F24F 140/40** (2018.01); **F24F 140/60** (2018.01)

CPC (source: EP)

F24F 3/001 (2013.01); **F24F 3/065** (2013.01); **F24F 5/001** (2013.01); **F24F 11/46** (2017.12); **F24F 11/63** (2017.12); **F24F 11/64** (2017.12); **F24F 11/83** (2017.12); **F24F 11/86** (2017.12); **F24F 2003/003** (2013.01); **F24F 2110/10** (2017.12); **F24F 2110/12** (2017.12); **F24F 2110/20** (2017.12); **F24F 2110/22** (2017.12); **F24F 2110/32** (2017.12); **F24F 2140/20** (2017.12); **F24F 2140/40** (2017.12); **F24F 2140/60** (2017.12)

Cited by

CN115773579A

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 3961115 A1 20220302; **EP 3961115 A4 20220615**; **EP 3961115 B1 20230712**; CN 113631866 A 20211109; CN 113631866 B 20220621; ES 2955350 T3 20231130; JP 2020183862 A 20201112; JP 6819807 B2 20210127

DOCDB simple family (application)

EP 20794580 A 20200417; CN 202080025762 A 20200417; ES 20794580 T 20200417; JP 2020073804 A 20200417