

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
03 May 2018 (03.05.2018)



(10) International Publication Number
WO 2018/076056 A1

- (51) **International Patent Classification:**
H05K 7/20 (2006.01) *G06F 1/20* (2006.01)
- (21) **International Application Number:**
PCT/AU2017/051172
- (22) **International Filing Date:**
25 October 2017 (25.10.2017)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
2016101872 25 October 2016 (25.10.2016) AU
2016904338 25 October 2016 (25.10.2016) AU
- (71) **Applicant:** NEXTDC LIMITED [AU/AU]; 826 Lorimer Street, Port Melbourne, Victoria 3207 (AU).
- (72) **Inventors:** VAN ZETTEN, Jeffrey Daniel; c/- 826 Lorimer Street, Port Melbourne, Victoria 3207 (AU). HUBNER, Mark Kenneth; c/- 826 Lorimer Street, Port Melbourne, Victoria 3207 (AU).
- (74) **Agent:** FPA PATENT ATTORNEYS PTY LTD; Level 43, 101 Collins Street, Melbourne, Victoria 3000 (AU).
- (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, 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, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

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

(54) **Title:** DATA CENTRE COOLING REGULATION SYSTEM AND METHOD

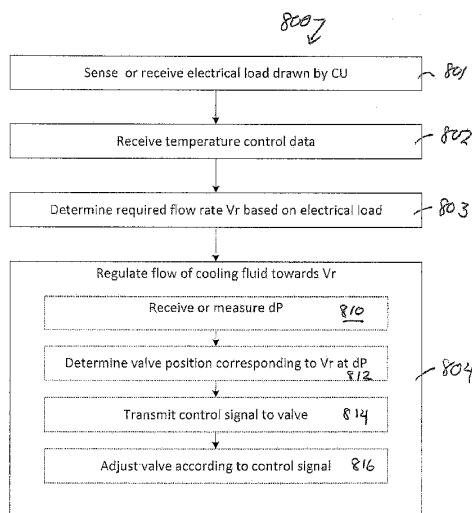


FIG. 8

(57) **Abstract:** A method of cooling a plurality of computing units accommodated in a space using a cooling fluid, said cooling fluid being introduced into the space via one or more inlets and being arranged to leave the space via one or more outlets, said method comprising: sensing an electrical load of one or more of the computing units, receiving desired temperature control data, determining a required flow rate Vr of the cooling fluid based on the sensed electrical load and the received temperature control data, regulating the flow of the cooling fluid to achieve the required flow rate.

WO 2018/076056 A1