

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
07 April 2022 (07.04.2022)



(10) International Publication Number
WO 2022/067372 A1

(51) International Patent Classification:

B25J 9/00 (2006.01) *G06F 3/16* (2006.01)
G06N 3/00 (2006.01) *B25J 19/00* (2006.01)
G06T 19/00 (2011.01) *B25J 11/00* (2006.01)
G06T 13/40 (2011.01)

(21) International Application Number:

PCT/AU2021/050698

(22) International Filing Date:

30 June 2021 (30.06.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2020903504 29 September 2020 (29.09.2020) AU
202110133608.1 01 February 2021 (01.02.2021) CN

(71) Applicant: **HUMAN CENTRED INNOVATIONS PTY LTD** [AU/AU]; 61 Civic Drive, Building B, Suite B123, Greensborough, Victoria 3088 (AU).

(72) Inventors: **KHOSLA, Rajiv**; c/o Human Centred Innovations Pty Ltd, 61 Civic Drive, Building B, Suite B123, Greensborough, Victoria 3088 (AU). **NGUYEN, Khanh Tuan**; c/o Human Centred Innovations Pty Ltd, 61 Civic Drive, Building B, Suite B123, Greensborough, Victoria 3088 (AU).

(74) Agent: **GRIFFITH HACK**; GPO Box 1285, Melbourne, Victoria 3001 (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,

(54) Title: VIRTUAL AND PHYSICAL SOCIAL ROBOT WITH HUMANOID FEATURES

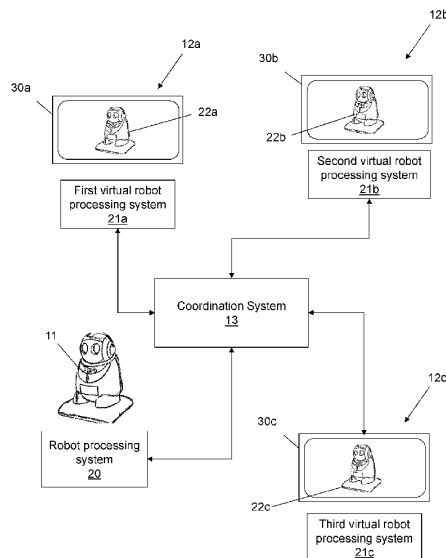


Figure 7

(57) Abstract: A human interaction system for interaction by a user comprising social systems comprising at least a social robot and one or more virtual robot systems, and a coordination system, wherein: the social robot is controlled by a robot processing system and is configured to provide interaction with a user, said interaction including output means and input means, the one or more virtual robot systems are configured to controllably present an avatar representation of the social robot, and further configured to receive inputs, the coordination system is configured to coordinate operation of the social robot and the one or more virtual robots such that, at any one time, either the social robot or one of the virtual robot systems is active, such that, in operation, a user perceives a robot personality associated with the social robot and the avatar as associated with the active social robot or virtual robot system.

[Continued on next page]

WO 2022/067372 A1

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))