

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
29 February 2024 (29.02.2024)



(10) International Publication Number
WO 2024/041897 A1

(51) International Patent Classification:

H04W 12/108 (2021.01) B64C 39/02 (2023.01)
H04W 12/043 (2021.01) G08G 5/00 (2006.01)
H04L 9/40 (2022.01) G08G 5/02 (2006.01)
G06Q 10/083 (2023.01) B64U 101/60 (2023.01)
B64U 80/00 (2023.01)

(21) International Application Number:

PCT/EP2023/072110

(22) International Filing Date:

09 August 2023 (09.08.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2212347.5 25 August 2022 (25.08.2022) GB

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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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY,

(54) Title: SECURE COMMUNICATION FOR UNMANNED AERIAL VEHICLE IN INTEGRATED ECOSYSTEM

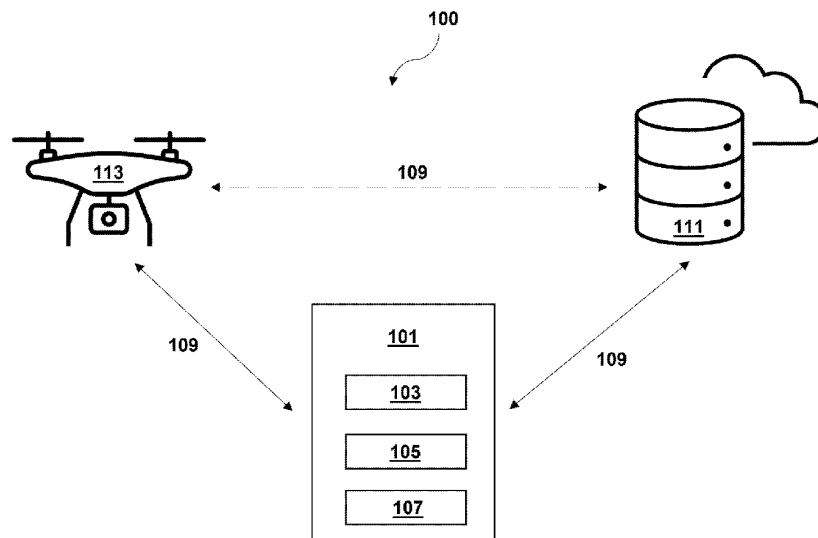


Figure 1

(57) Abstract: Present invention discloses a method for establishing a secured communication for an Unmanned Aerial Vehicle (UAV) (113). Further, the present disclosure discloses a user terminal (101), a server (111) and the UAV (113) to establish the secured communication. The server (111) transmits a delivery response to the user terminal (101) on receiving a delivery request from the user terminal (101). Thereafter, the user terminal (101) receives an UAV battery charge level from the UAV (113) in response to the user terminal's request to the UAV (113). Based on the UAV battery charge level and a threshold battery charge level received in the delivery response, the user terminal (101) transmits the delivery response to the UAV (113). The UAV (113) verifies a signature in the delivery response using a unique public key of a public and private key pair and transmits an acknowledgement for the delivery response to the user terminal (101) upon verifying the signature. Subsequently, the user terminal (101), upon receiving the acknowledgement, generates

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MA, MD, MG, MK, MN, MU, 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, CV,
GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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,
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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))*

and transmits a session key to the UAV (113) for establishing a secure communication between the UAV (113) and the server (111) for transportation. The UAV (113) establishes the secure communication with the server (111) using the session key.