

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
25 January 2024 (25.01.2024)



(10) International Publication Number
WO 2024/019893 A1

(51) International Patent Classification:

G06F 21/55 (2013.01) G06F 21/51 (2013.01)
G06F 21/54 (2013.01) G06F 21/57 (2013.01)

(21) International Application Number:

PCT/US2023/027156

(22) International Filing Date:

07 July 2023 (07.07.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/391,433 22 July 2022 (22.07.2022) US
18/213,337 23 June 2023 (23.06.2023) US

(71) Applicant: SEMPERIS TECHNOLOGIES INC. (US)

[US/US]; 221 River Street, 9th Floor, Hoboken, New Jersey
07030 (US).

(72) Inventors: **BAIKALOV, Igor**; 221 River Street, 9th Floor,
Hoboken, New Jersey 07030 (US). **TEVEROVSKY, Guy**;
221 River Street, 9th Floor, Hoboken, New Jersey 07030
(US). **KIRKPATRICK, Gil**; 221 River Street, 9th Floor,
Hoboken, New Jersey 07030 (US). **SHAMIR, Elad**; 221
River Street, 9th Floor, Hoboken, New Jersey 07030 (US).

(74) Agent: **MERENSTEIN, Eric C.** et al.; Lowenstein Sandler
LLP, One Lowenstein Drive, Roseland, New Jersey 07068
(US).

(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,
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,

(54) Title: ATTACK PATH MONITORING AND RISK MITIGATION IN IDENTITY SYSTEMS

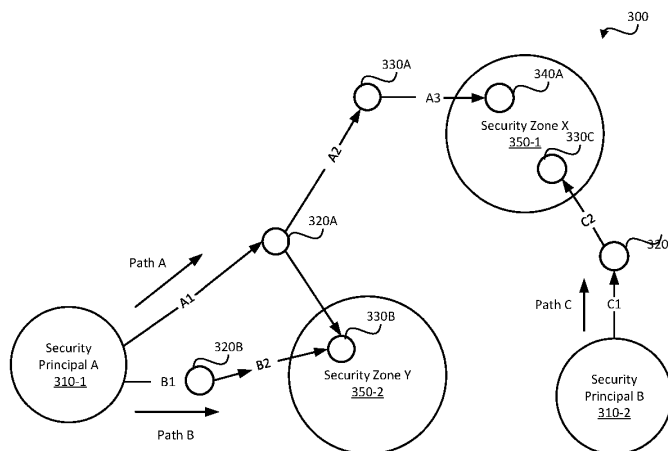


FIG. 3

(57) Abstract: A method includes generating, by a processing device, at least one security zone comprising a set of objects of a computing environment using at least one identity system, and identifying, by the processing device, a set of attack paths leading to the at least one security zone. Each attack path of the set of attack paths includes a respective target object accessible via a respective source object through at least one control relationship, and each target object is included within the set of objects of the at least one security zone. The method further includes performing, by the processing device based on the set of attack paths, attack path monitoring and risk mitigation.

[Continued on next page]

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, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, 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:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report (Art. 21(3))*