

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

(19) World Intellectual Property  
Organization  
International Bureau

(43) International Publication Date  
06 June 2024 (06.06.2024)



(10) International Publication Number  
**WO 2024/114964 A1**

(51) International Patent Classification:  
H04L 41/14 (2022.01) H04L 43/16 (2022.01)  
H04L 43/0876 (2022.01)

(21) International Application Number:  
PCT/EP2023/073150

(22) International Filing Date:  
23 August 2023 (23.08.2023)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
20230100649 03 August 2023 (03.08.2023) GR

(71) Applicant: **LENOVO (SINGAPORE) PTE. LTD.**  
[SG/SG]; 151, Lorong Chuan #02-01, New Tech Park, Singapore 556741 (SG).

(72) Inventors: **KARAMPATIS, Dimitrios**; 9 Lawn Close, Ruislip, Middlesex HA4 6ED (GB). **PATEROMICHELAKIS, Emmanouil**; Breyeller Str. 37, 41751 Viersen (DE). **SAMDANIS, Konstantinos**; Rablst. 18 VI, 81669 Munich (DE).

(74) Agent: **MARKS & CLERK LLP**; 15 Fetter Lane, London Greater London EC4A 1BW (GB).

(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: HANDLING EXCESSIVE SERVICE BASED INTERFACE SIGNALLING IN A CORE NETWORK

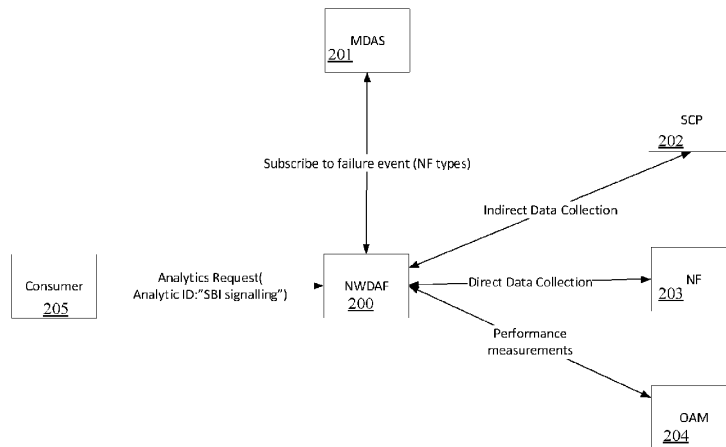


Figure 4

(57) Abstract: Various aspects of the present disclosure relate to a network node configured to receive an analytics request relating to SBI signalling exchanges for each of a first set of NFs. The processor is further configured to subscribe via an OAM service to receive first information on a volume of SBI exchanges for each of the NFs, derive for each of the first set of NFs a threshold volume of SBI signalling exchanges based on the first information, subscribe to a MDAS to receive fault information for a second set of NFs, upon receiving fault information from the MDAS for one of the second set of NFs, monitor via said OAM service a volume of SBI signalling exchanges for one of the first set of NFs to determine whether or not the associated threshold is reached, and provide an analytic output in response.

[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).

**Published:**

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*
- *upon request of the applicant, before the expiration of the time limit referred to in Article 21(2)(a)*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*