

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
05 January 2023 (05.01.2023)



(10) International Publication Number
WO 2023/277814 A2

(51) International Patent Classification:
Not classified

(21) International Application Number:
PCT/SG2022/050450

(22) International Filing Date:
29 June 2022 (29.06.2022)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PCT/CN2021/103471
30 June 2021 (30.06.2021) CN

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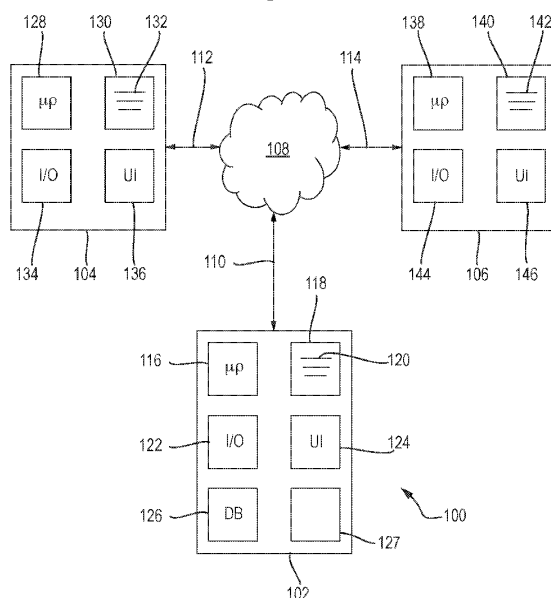
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, 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, 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,

(54) Title: COMPUTER-IMPLEMENTED APPARATUS AND METHOD FOR PREDICTING TRAFFIC CONDITIONS IN A ROUTE PLANNING APPLICATION

Fig. 1



(57) Abstract: A computer-implemented apparatus, and associated method, for predicting traffic conditions in respect of a specified route selected from within a road network representative of a geographical region. The computer-implemented apparatus comprises a processor and memory and is configured, under control of the processor, to execute instructions stored in the memory to: receive input data representative of said specified route comprising one or more road segments between a start location and a destination selected from within a road network representing a geographical region; obtain a diffusion graph representative of said specified route, said diffusion graph comprising edges connected by nodes, wherein a weight associated with each edge comprises a respective transition probability representing a likelihood of traffic on a respective road segment diffusing to another road segment; and use a Transformer-based framework to predict a traffic condition for each segment of the route; wherein said Transformer-based framework comprises an attention module and an input configured to receive a set of input dimensions for each segment of the route, said dimensions including at least a respective transition probability and temporal data, said Transformer-based framework further comprising an attention adjust module configured to receive each set of input dimensions and generate therefrom a weight modifier for modifying attention weights generated by said attention module based on the likelihood of a traffic state on one road segment influencing a traffic state on another road segment.

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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:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *of inventorship (Rule 4.17(iv))*

Published:

- *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*