



(51) International Patent Classification:

G06K 9/62 (2022.01) G06F 16/30 (2019.01)
G06F 3/0481 (2022.01)

(21) International Application Number:

PCT/US2021/063837

(22) International Filing Date:

16 December 2021 (16.12.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/126,298 16 December 2020 (16.12.2020) US

(71) Applicant: **MEMORIAL SLOAN KETTERING CANCER CENTER** [US/US]; 1275 York Avenue, New York, New York 10065 (US).

(72) Inventors: **FUCHS, Thomas**; c/o Memorial Sloan Kettering Cancer Center, 1275 York Avenue, New York, New York 10065 (US). **SCHÜFFLER, Peter J.**; c/o Memorial Sloan Kettering Cancer Center, 1275 York Avenue, New York, New York 10065 (US). **YARLAGADDA, Dig Vijay Kumar**; c/o Memorial Sloan Kettering Cancer Center, 1275 York Avenue, New York, New York 10065 (US). **VAN-DEBILT, Chad**; c/o Memorial Sloan Kettering Cancer Center, 1275 York Avenue, New York, New York 10065 (US).

(74) Agent: **KHAN, Shabbi S.** et al.; c/o Foley & Lardner LLP, 3000 K Street NW, Suite 600, Washington, 20007 (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, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN,

(54) Title: DETECTION OF ANNOTATED REGIONS OF INTEREST IN IMAGES

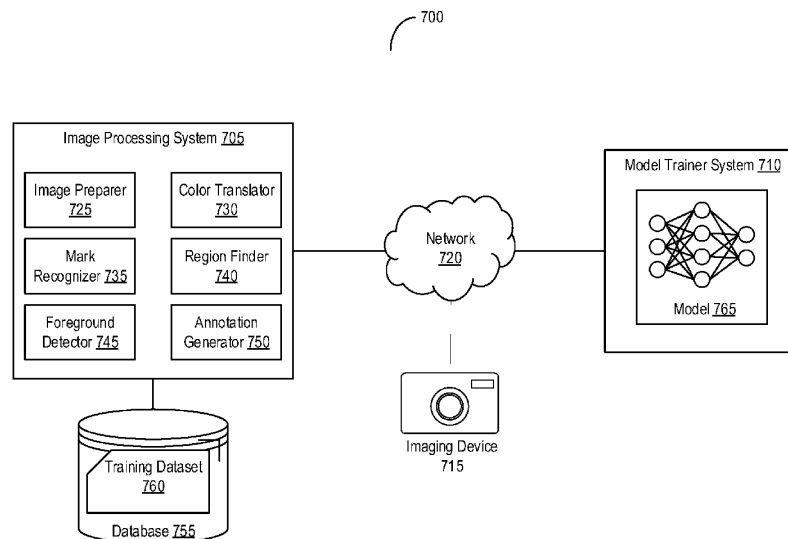


FIG. 7

(57) Abstract: The present disclosure is directed to systems and methods for identifying regions of interest (ROIs) in images. A computing system may identify an image including an annotation defining an ROI. The image may have a plurality of pixels in a first color space. The computing system may convert the plurality of pixels from the first color space to a second color space to differentiate the annotation from the ROI. The computing system may select a first subset of pixels corresponding to the annotation based at least on a color value of the first subset of pixels in the second color space. The computing system may identify a second subset of pixels included in the ROI from the image using the first subset of pixels. The computing system may store an association between the second subset of pixels and the ROI defined by the annotation in the image.

[Continued on next page]

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))*