

(12) 按照专利合作条约所公布的国际申请

(19) 世界知识产权组织
国际局



(10) 国际公布号
WO 2020/124993 A1

(43) 国际公布日
2020 年 6 月 25 日 (25.06.2020)

(51) 国际专利分类号:
G06K 9/00 (2006.01)

(21) 国际申请号: PCT/CN2019/095080

(22) 国际申请日: 2019 年 7 月 8 日 (08.07.2019)

(25) 申请语言: 中文

(26) 公布语言: 中文

(30) 优先权:
201811548844.4 2018 年 12 月 18 日 (18.12.2018) CN

(71) 申请人: 北京字节跳动网络技术有限公司 (BEIJING BYTEDANCE NETWORK TECHNOLOGY CO., LTD.) [CN/CN]; 中国北京市石景山区实兴大街 30 号院 3 号楼 2 层 B-0035 房间, Beijing 100041 (CN)。

(72) 发明人: 王旭 (WANG, Xu); 中国北京市海淀区知春路 63 号中国卫星通信大厦今日头条小邮局, Beijing 100190 (CN)。

(74) 代理人: 北京品源专利代理有限公司 (BEYOND ATTORNEYS AT LAW); 中国北京市海淀区莲花池东路 39 号西金大厦 6 层, Beijing 100036 (CN)。

(81) 指定国 (除另有指明, 要求每一种可提供的国家保护): 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, 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,

(54) Title: LIVENESS DETECTION METHOD AND APPARATUS, ELECTRONIC DEVICE, AND STORAGE MEDIUM

(54) 发明名称: 活体检测方法、装置、电子设备及存储介质

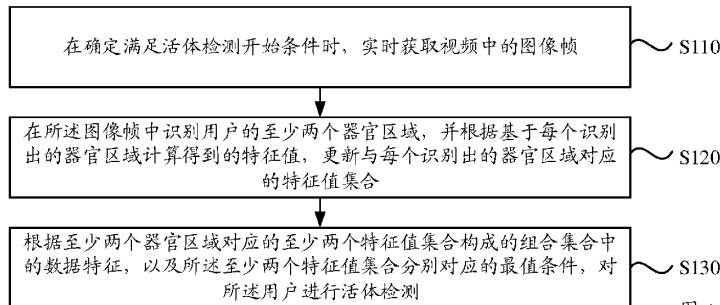


图 1

S110 Obtain an image frame in a video in real time upon determining that a liveness detection starting condition is met

S120 Recognize at least two organ areas of a user in the image frame, and update the feature value set corresponding to each recognized organ area according to feature values obtained by calculation based on each recognized organ area

S130 Perform liveness detection on the user according to the data features in a combination set consisting of the at least two feature value sets corresponding to the at least two feature value sets, and the maximum or minimum value conditions respectively corresponding to the at least one feature value sets

(57) Abstract: A liveness detection method and apparatus, an electronic device, and a storage medium. The method comprises: obtaining an image frame in a video in real time upon determining that a liveness detection starting condition is met (S110); recognizing at least two organ areas of a user in the image frame, and updating the feature value set corresponding to each recognized organ area according to feature values obtained by calculation based on each recognized organ area (S120), wherein each organ area corresponds to at least one feature value set, each feature value set corresponds to a maximum or minimum value condition, and each feature value set comprises at least one feature value; and performing liveness detection on the user according to the data features in a combination set consisting of the at least two feature value sets corresponding to the at least two feature value sets, and the maximum or minimum value conditions respectively corresponding to the at least one feature value sets (S130).

[见续页]

SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG,
US, UZ, VC, VN, ZA, ZM, ZW。

- (84) 指定国 (除另有指明, 要求每一种可提供的地区
保护): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ,
NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), 欧亚 (AM,
AZ, BY, KG, KZ, RU, TJ, TM), 欧洲 (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)。

本国际公布:

- 包括国际检索报告 (条约第21条(3))。

(57) 摘要: 一种活体检测方法、装置、电子设备及存储介质。该方法包括: 在确定满足活体检测开始条件时, 实时获取视频中的图像帧 (S110); 在所述图像帧中识别用户的至少两个器官区域, 并根据基于每个识别出的器官区域计算得到的特征值, 更新与每个识别出的器官区域对应的特征值集合 (S120), 其中, 每个器官区域对应至少一个特征值集合, 每个特征值集合对应一个最值条件, 每个特征值集合包括至少一个特征值; 根据至少两个器官区域对应的至少两个特征值集合构成的组合集合中的数据特征, 以及所述至少两个特征值集合分别对应的最值条件, 对所述用户进行活体检测 (S130)。