

(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 2024/213145 A1

(43) 国际公布日
2024 年 10 月 17 日 (17.10.2024)

WIPO | PCT

(51) 国际专利分类号:
H04N 19/103 (2014.01)

(21) 国际申请号: PCT/CN2024/087619

(22) 国际申请日: 2024 年 4 月 12 日 (12.04.2024)

(25) 申请语言: 中文

(26) 公布语言: 中文

(30) 优先权:
2023 10429626.3 2023 年 4 月 14 日 (14.04.2023) CN

(71) 申请人: 杭州海康威视数字技术股份有限公司 (HANGZHOU HIKVISION DIGITAL TECHNOLOGY CO., LTD.) [CN/CN]; 中国浙江省杭州市滨江区阡陌路 555 号, Zhejiang 310051 (CN)。

(72) 发明人: 陈方栋 (CHEN, Fangdong); 中国浙江省杭州市滨江区阡陌路 555 号, Zhejiang 310051 (CN)。王莉 (WANG, Li); 中国浙江省杭州市滨江区阡陌路 555 号, Zhejiang 310051 (CN)。武晓阳 (WU, Xiaoyang); 中国浙江省杭州市滨江区阡陌路 555 号, Zhejiang 310051 (CN)。

(74) 代理人: 北京博思佳知识产权代理有限公司 (BEIJING BESTIPR INTELLECTUAL PROPERTY LAW CORPORATION); 中国北京市海淀区上地三街 9 号嘉华大厦 B 座 409, Beijing 100085 (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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI,

(54) Title: DECODING METHOD AND APPARATUS, ENCODING METHOD AND APPARATUS, DEVICE, AND MEDIUM

(54) 发明名称: 一种解码、编码方法、装置及其设备及介质

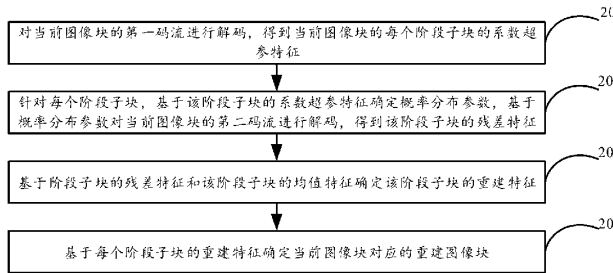


图 2

- 201 Decode a first code stream of a current image block to obtain a coefficient hyperparameter feature of each stage sub-block of the current image block
- 202 For each stage sub-block, determine a probability distribution parameter on the basis of the coefficient hyperparameter feature of the stage sub-block, and decode a second code stream of the current image block on the basis of the probability distribution parameter to obtain a residual feature of the stage sub-block
- 203 Determine a reconstruction feature of the stage sub-block on the basis of the residual feature of the stage sub-block and a mean value feature of the stage sub-block
- 204 On the basis of the reconstruction feature of each stage sub-block, determine a reconstructed image block corresponding to the current image block

(57) Abstract: The present application provides a decoding method and apparatus, an encoding method and apparatus, a device, and a medium. The decoding method comprises: decoding a first code stream of a current image block to obtain a coefficient hyperparameter feature of each stage sub-block of the current image block; for each stage sub-block, determining a probability distribution parameter on the basis of the coefficient hyperparameter feature of the stage sub-block, and decoding a second code stream of the current image block on the basis of the probability distribution parameter to obtain a residual feature of the stage sub-block; determining a reconstruction feature of the stage sub-block on the basis of the residual feature of the stage sub-block and a mean value feature of the stage sub-block;

[见续页]

WO 2024/213145 A1

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, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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, 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)。

本国际公布:

— 包括国际检索报告(条约第21条(3))。

and on the basis of the reconstruction feature of each stage sub-block, determining a reconstructed image block corresponding to the current image block. By means of the technical solution of the present application, the encoding performance and the decoding performance can be improved.

(57) 摘要: 本申请提供一种解码、编码方法、装置及其设备及介质, 该解码方法包括: 对当前图像块的第一码流进行解码, 得到当前图像块的每个阶段子块的系数超参特征; 针对每个阶段子块, 基于该阶段子块的系数超参特征确定概率分布参数, 基于所述概率分布参数对当前图像块的第二码流进行解码, 得到该阶段子块的残差特征; 基于该阶段子块的残差特征和该阶段子块的均值特征确定该阶段子块的重建特征; 基于每个阶段子块的重建特征确定所述当前图像块对应的重建图像块。通过本申请技术方案, 能够提高编码性能和解码性能。