



(51) **International Patent Classification:**
H04N 19/86 (2014.01) *H04N 19/159* (2014.01)

(21) **International Application Number:**
PCT/CN2020/071272

(22) **International Filing Date:**
10 January 2020 (10.01.2020)

(25) **Filing Language:** English

(26) **Publication Language:** English

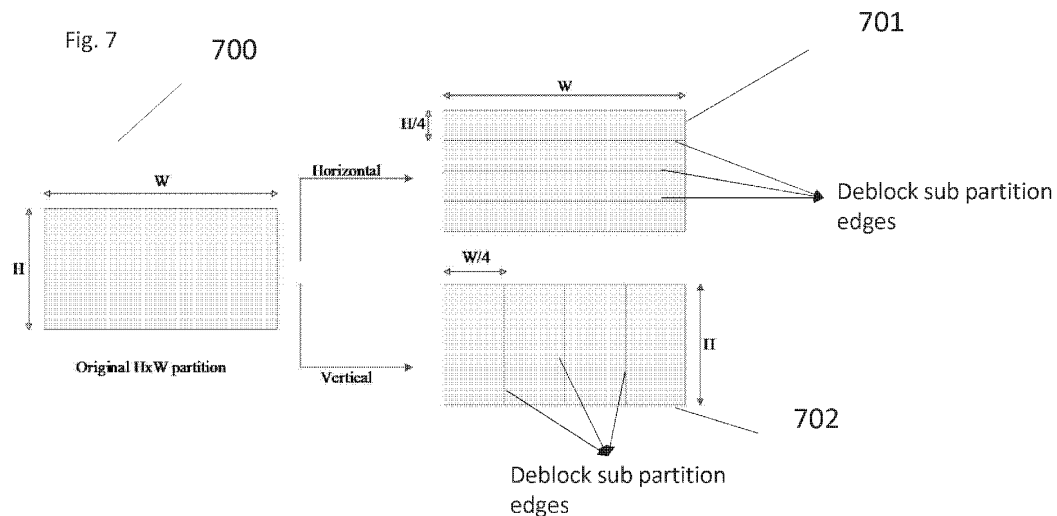
(30) **Priority Data:**
62/791,003 10 January 2019 (10.01.2019) US

(71) **Applicant: HUAWEI TECHNOLOGIES CO., LTD.**
[CN/CN]; Huawei Administration Building, Bantian, Long-
gang District, Shenzhen, Guangdong 518129 (CN).

(72) **Inventors: WANG, Biao;** Riesstr.25, 80992 Munich (DE).
KOTRA, Anand Meher; Riesstr.25, 80992 Munich (DE).
ESENLIK, Semih; Riesstr.25, 80992 Munich (DE). **GAO,**
Han; Riesstr.25, 80992 Munich (DE). **CHEN, Jianle;**
Riesstr.25, 80992 Munich (DE).

(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, 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.

(54) **Title:** Deblocking filter for sub-partition boundaries caused by intra sub-partition coding tool



(57) **Abstract:** It is provided a deblocking method, for deblocking a sub-partitions boundary within a coding block in an image encoding and/or an image decoding, wherein the current coding block is coded in intra prediction mode and the current coding block is partitioned into sub-partitions comprising a first sub-partition and a second sub-partition which is adjacent to the first sub-partition; wherein the method comprises: determining a maximum filter length to be 1 for a first/second sub-partition when a width of the first or second sub-partition is 4 samples, or when a height of the first or second sub-partition is 4 samples; modifying a value of up to one sample of the first or second sub-partition, wherein the up to one sample is obtained from a row or column of the first or second sub-partition that is perpendicular to and adjacent to the sub-partitions boundary between the first sub-partition and the second sub-partition. The present disclosure allows for modifying a small number of sample values at the sub-partition boundary, and therefore the method can reduce the block artifact that might be caused by sub-partition boundaries in the current coding block applied with an Intra sub-partition, ISP, tool.

(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))