



- (51) **International Patent Classification:**
H04N 19/70 (2014.01) *H04N 19/503* (2014.01)
- (21) **International Application Number:**
PCT/EP2021/063587
- (22) **International Filing Date:**
21 May 2021 (21.05.2021)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
20176178.0 22 May 2020 (22.05.2020) EP
20176206.9 22 May 2020 (22.05.2020) EP
- (71) **Applicant:** **FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER ANGEWANDTEN FORSCHUNG E.V.** [DE/DE]; Hansastraße 27c, 80686 München (DE).
- (72) **Inventors:** **SÁNCHEZ DE LA FUENTE, Yago**; Fraunhofer-Institut für Nachrichtentechnik, Heinrich-Hertz-Institut, HHI, Einsteinufer 37, 10587 Berlin (DE). **SÜHRING, Karsten**; Fraunhofer-Institut für Nachrichtentechnik, Heinrich-Hertz-Institut, HHI, Einsteinufer

37, 10587 Berlin (DE). **HELLGE, Cornelius**; Fraunhofer-Institut für Nachrichtentechnik, Heinrich-Hertz-Institut, HHI, Einsteinufer 37, 10587 Berlin (DE). **SCHIERL, Thomas**; Fraunhofer-Institut für Nachrichtentechnik, Heinrich-Hertz-Institut, HHI, Einsteinufer 37, 10587 Berlin (DE). **SKUPIN, Robert**; Fraunhofer-Institut für Nachrichtentechnik, Heinrich-Hertz-Institut, HHI, Einsteinufer 37, 10587 Berlin (DE). **WIEGAND, Thomas**; Fraunhofer-Institut für Nachrichtentechnik, Heinrich-Hertz-Institut, HHI, Einsteinufer 37, 10587 Berlin (DE).

- (74) **Agent:** **SCHAIRER, Oliver** et al.; Schoppe, Zimmermann, Stöckeler, Zinkler, Schenk & Partner mbB, Radlkoferstr. 2, 81373 München (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, IT, 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,

- (54) **Title:** VIDEO ENCODER, VIDEO DECODER, METHODS FOR ENCODING AND DECODING AND VIDEO DATA STREAM FOR REALIZING ADVANCED VIDEO CODING CONCEPTS

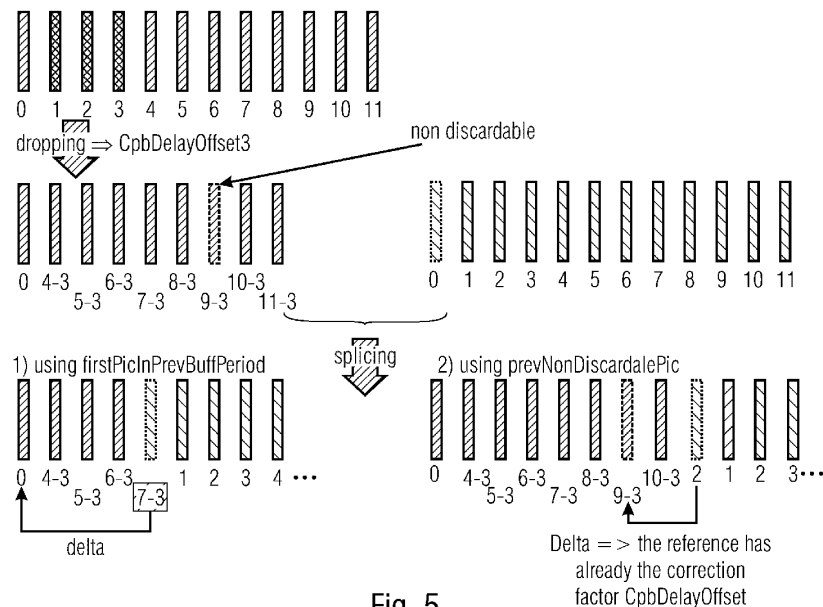


Fig. 5

- (57) **Abstract:** An apparatus (200) for receiving an input video data stream according to an embodiment is provided. The input video data stream has a video encoded thereinto. The apparatus (200) is configured to generate an output video data stream from the input video data stream.

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))