

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau

(43) International Publication Date  
13 January 2022 (13.01.2022)



(10) International Publication Number  
**WO 2022/008571 A2**

(51) International Patent Classification:  
**G10L 19/005** (2013.01)

(21) International Application Number:  
PCT/EP2021/068774

(22) International Filing Date:  
07 July 2021 (07.07.2021)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
63/049,323 08 July 2020 (08.07.2020) US  
63/208,896 09 June 2021 (09.06.2021) US

(71) Applicant: **DOLBY INTERNATIONAL AB** [SE/NL];  
Apollo Building, 3E Herikerbergweg 1-35, 1101 CN Amsterdam Zuidooost (NL).

(72) Inventors: **MUNDT, Harald**; c/o Dolby Germany GmbH Deutschhermstrasse 15-19, 90429 Nuremberg (DE). **BRUHN, Stefan**; c/o Dolby Germany GmbH Deutschhermstrasse 15-19, 90429 Nuremberg (DE). **PUHNHAGEN, Heiko**; c/o Dolby Sweden AB Gävlegatan 12A, 113 30 Stockholm (SE). **PLAIN, Simon**; c/o Dolby Germany GmbH Deutschhermstrasse 15-19, 90429 Nuremberg (DE). **SCHUG, Michael**; c/o Dolby Germany GmbH Deutschhermstrasse 15-19, 90429 Nuremberg (DE).

(74) Agent: **DOLBY INTERNATIONAL AB PATENT GROUP EUROPE**; Apollo Building, 3E Herikerbergweg 1-35, 1101 CN Amsterdam Zuidooost Noord Holland (NL).

(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, 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).

(54) Title: PACKET LOSS CONCEALMENT

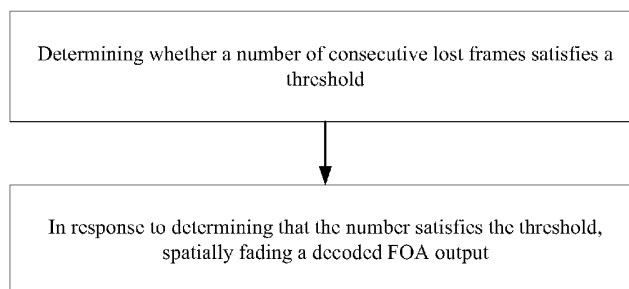


FIG. 3

(57) Abstract: Described are methods of processing an audio signal for packet loss concealment. The audio signal comprises a sequence of frames, each frame containing representations of a plurality of audio channels and reconstruction parameters for upmixing the plurality of audio channels to a predetermined channel format. One method includes: receiving the audio signal; and generating a reconstructed audio signal in the predefined channel format based on the received audio signal. Generating the reconstructed audio signal comprises: determining whether at least one frame of the audio signal has been lost; and if a number of consecutively lost frames exceeds a first threshold, fading the reconstructed audio signal to a predefined spatial configuration. Also described is a method of encoding an audio signal. Yet further described are apparatus for carrying out the methods, as well as corresponding programs and computer-readable storage media.

[Continued on next page]



WO 2022/008571 A2

**Declarations under Rule 4.17:**

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

**Published:**

- *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*