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(21) International Application Number: PCT/IB98/01971 (22) International Filing Date: 7 December 1998 (07.12.98) (30) Priority Data: 97204056.2 22 December 1997 (22.12.97) EP (71) Applicant: KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL). (71) Applicant (for SE only): PHILIPS AB [SE/SE]; Kottbygatan 7, Kista, S-164 85 Stockholm (SE). (72) Inventor: NUIJTEN, Petrus; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). (74) Agent: SCHMITZ, Herman; Internationaal Octrooibureau B.V., P.O. Box 220, NL-5600 AE Eindhoven (NL).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>Without international search report and to be republished upon receipt of that report.</i>
(54) Title: EMBEDDING SUPPLEMENTAL DATA IN AN ENCODED SIGNAL 		
(57) Abstract Method and arrangement for watermarking an audio or video signal. The signal is encoded by an encoder (6) which includes a feedback loop (64) to control the encoding process, such as a DPCM encoder or a (sigma-)delta modulator. The watermark (3) is embedded by modifying (2) selected samples of the encoded signal. Said modifying is carried out before the encoded signal is fed back so that quantization errors which are introduced by the embedded watermark will be eliminated by subsequent encoding operations. In addition, one or more samples preceding the selected samples are also modified in such a way that the error induced by the watermark is further reduced. This is achieved by "looking ahead" which (combination of) preceding sample modifications yields the best encoding quality.		