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FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER ANGEWANDTEN FORSCHUNG E.V. [DE/DE]; Hansastraße 27c, 80686 München (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **WABNIK, Stefan** [DE/DE]; Hultschiner Straße 16a, 26129 Oldenburg (DE). **PICKEL, Jörg** [DE/DE]; Herbsttal 2, 91230 Hap-purg (DE). **GREEVENBOSCH, Bert** [NL/NL]; Roest-mos 12, NL-3069 AR Rotterdam (NL). **GRILL, Bern-hard** [DE/DE]; Peter-Henlein-Str. 7, 91207 Lauf (DE). **EBERLEIN, Ernst** [DE/DE]; Waldstrasse 28, 91091 Großenseebach (DE). **DEL GARDO, Giovanni** [IT/DE]; Ziegelweg 6a, 90562 Heroldsberg (DE). **KRÄGELOH, Stefan** [DE/DE]; Schobertweg 51, 91056 Erlangen (DE). **ZITZMANN, Reinhard** [DE/DE]; Johann-Sebastian-Bach Straße 25, 90183 Baiersdorf (DE). **BLIEM, Tobias**[DE/DE]; Tennenloher Straße 26, 91058 Erlangen (DE). **BREILING, Marco** [DE/DE]; Christian-Ernst-Straße 8, 91052 Erlangen (DE). **BORSUM, Juliane** [DE/DE]; Täublingstr. 22, 91058 Erlangen (DE).(74) Agents: **BURGER, Markus** et al.; Schoppe, Zimmer-mann, Stöckeler & Zinkler, Postfach 246, 82043 Pullach bei München (DE).

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(54) Title: WATERMARK GENERATOR, WATERMARK DECODER, METHOD FOR PROVIDING A WATERMARK SIGNAL IN DEPENDENCE ON BINARY MESSAGE DATA, METHOD FOR PROVIDING BINARY MESSAGE DATA IN DEPENDENCE ON A WATERMARKED SIGNAL AND COMPUTER PROGRAM USING A DIFFERENTIAL ENCODING

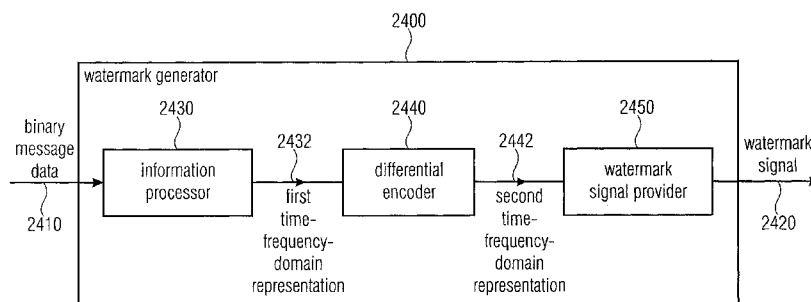


FIGURE 24

(57) Abstract: A watermark generator (2400) for providing a watermark signal (2420) in dependence on binary message data (2410), comprises an information processor (2430) configured to provide, in dependence on information units of the binary message data, a first time-frequency domain representation (2432), values of which represent the binary message data. The watermark generator also comprises a differential encoder (2440) configured to derive a second time-frequency domain representation (2442) from the first time-frequency-domain representation, such that the second time-frequency-domain representation comprises a plurality of values, wherein a difference between two values of the second time-frequency-domain representation represents a corresponding value of the first time-frequency-domain representation, in order to obtain a differential encoding of the values of the first time-frequency-domain representation. The watermark generator also comprises a watermark signal provider (2450) configured to provide the watermark signal on the basis of the second time-frequency-domain representation.

