



US007643996B1

(12) **United States Patent**
Gottesman

(10) **Patent No.:** **US 7,643,996 B1**
(45) **Date of Patent:** **Jan. 5, 2010**

(54) **ENHANCED WAVEFORM INTERPOLATIVE CODER**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/831,843**

(22) PCT Filed: **Dec. 1, 1999**

(86) PCT No.: **PCT/US99/28449**

§ 371 (c)(1),
(2), (4) Date: **Aug. 13, 2001**

(87) PCT Pub. No.: **WO00/33297**

PCT Pub. Date: **Jun. 8, 2000**

Related U.S. Application Data

(60) Provisional application No. 60/110,522, filed on Dec. 1, 1998, provisional application No. 60/110,641, filed on Dec. 1, 1998.

(51) **Int. Cl.**
G10L 13/04 (2006.01)

(52) **U.S. Cl.** **704/265; 704/219; 704/230; 704/220; 704/205; 704/223**

(58) **Field of Classification Search** **704/205, 704/207, 219, 230, 220, 222, 225, 265, 223**
See application file for complete search history.

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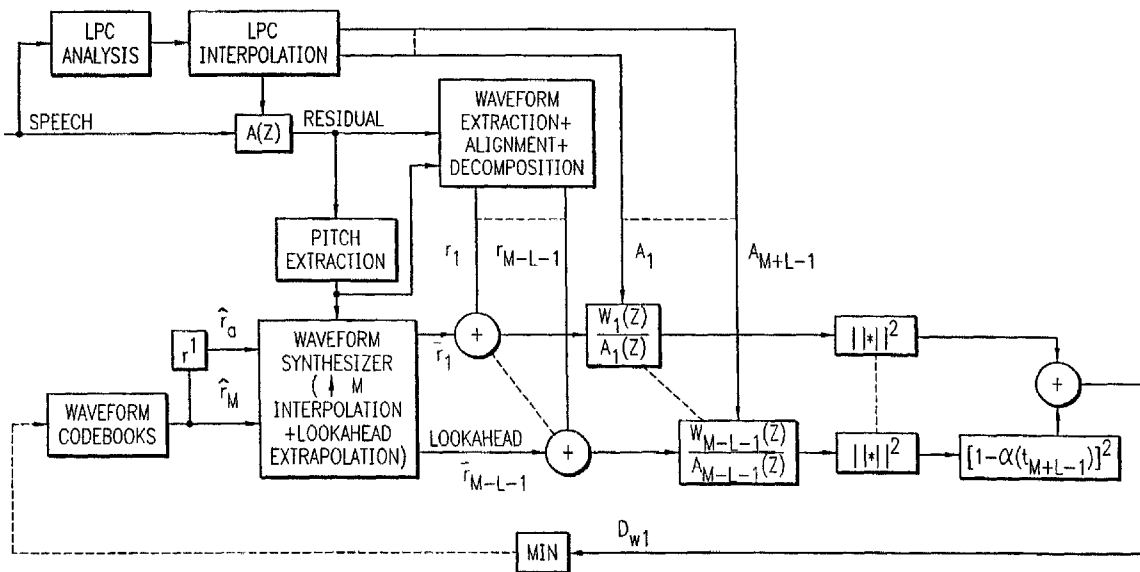
* cited by examiner

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(57) **ABSTRACT**

An Enhanced analysis-by-synthesis Waveform Interpolative speech coder able to operate at 4 kbps. Novel features include analysis-by-synthesis quantization of the slowly evolving waveform, analysis-by-synthesis vector quantization of the dispersion phase, a special pitch search for transitions, and switched-predictive analysis-by-synthesis gain vector quantization. Subjective quality tests indicate that it exceeds MPEG-4 at 4 kbps and of G.723.1 at 6.3 kbps.

34 Claims, 4 Drawing Sheets



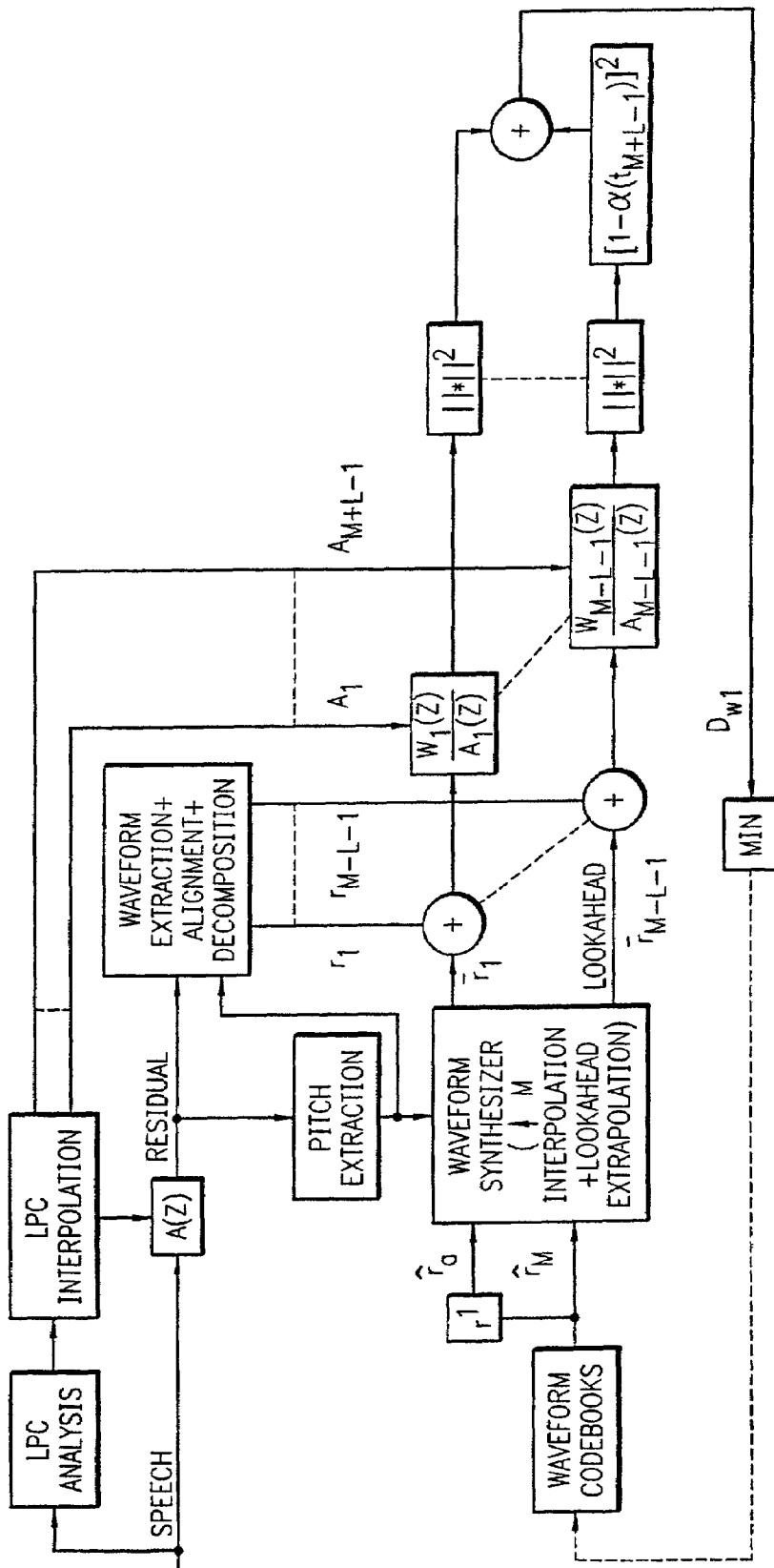


FIG. 1

FIG. 2

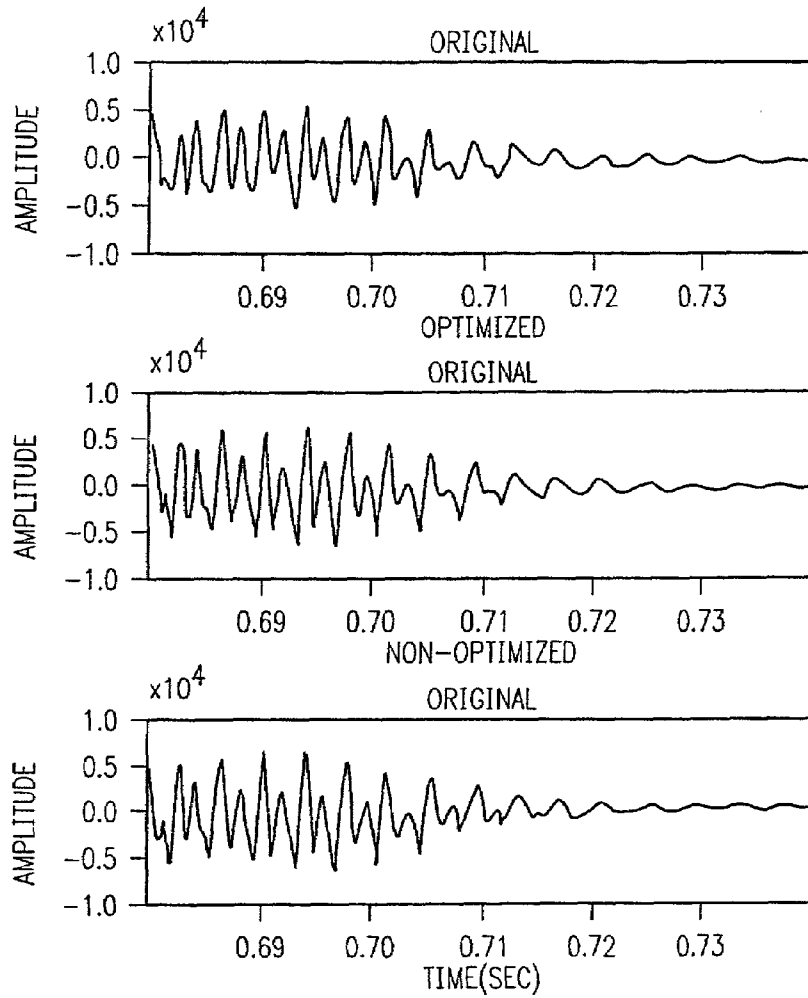


FIG. 3

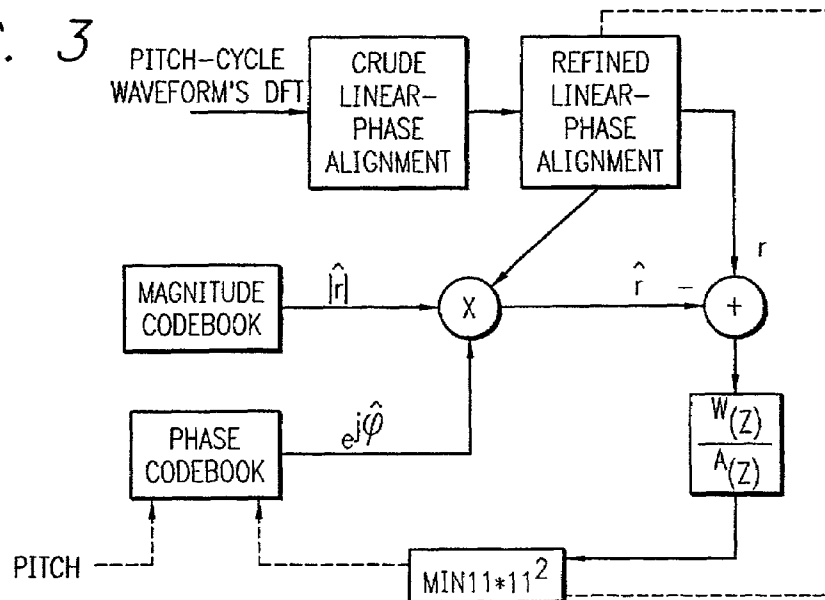


FIG. 4

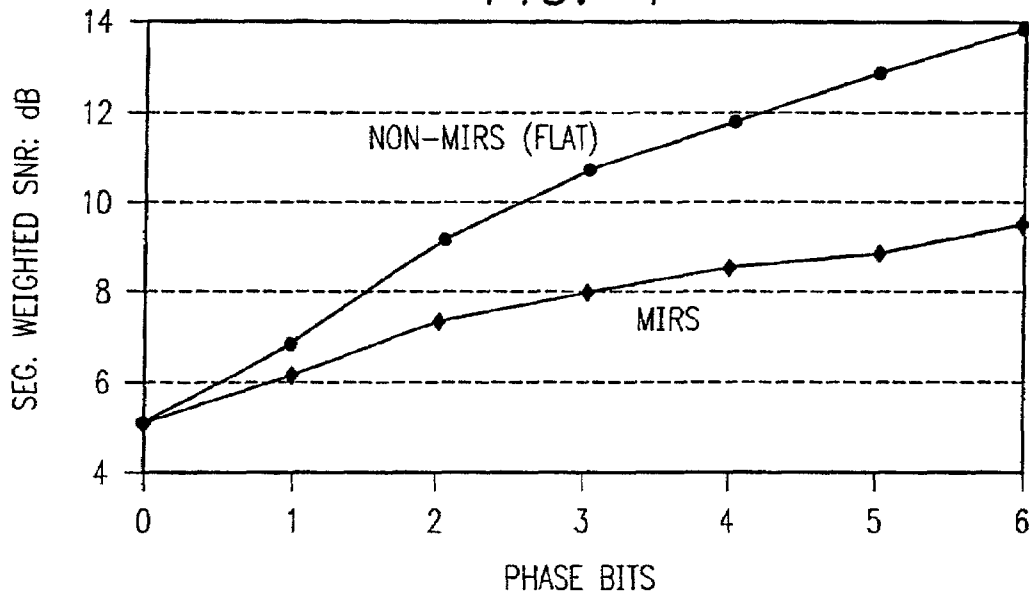
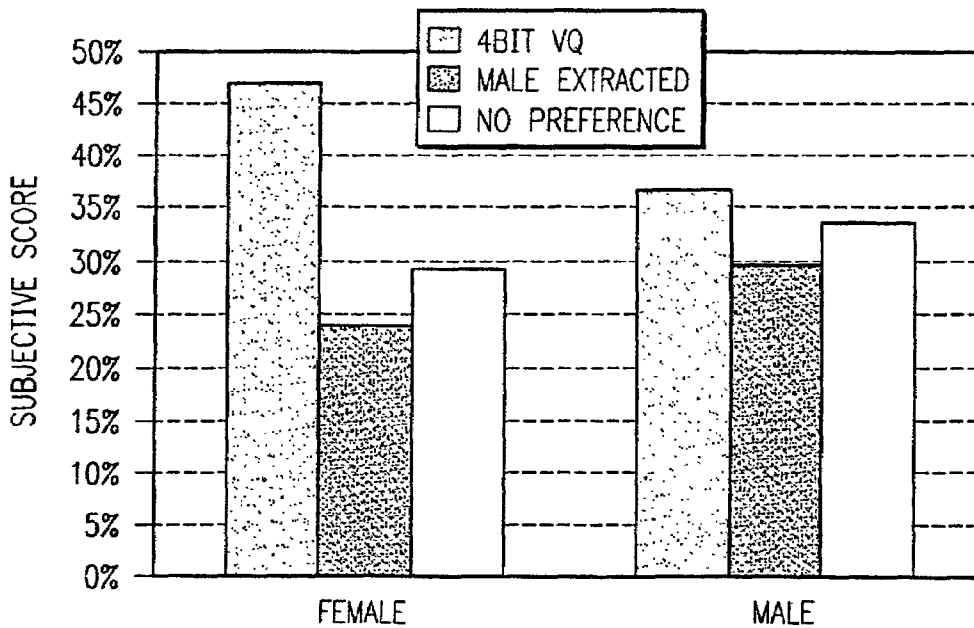


FIG. 5



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