

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.

Paper No. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LEVENT M. ARSLAN, ALAN V. McCREE and
VISHU R. VISWANATHAN

Appeal No. 1998-2664
Application No. 08/426,426

ON BRIEF

Before THOMAS, KRASS, and GROSS, Administrative Patent Judges.

THOMAS, Administrative Patent Judge.

DECISION ON APPEAL

Appellants have appealed to the board from the examiner's final rejection of claims 1, 2 and 6 through 10. The examiner has objected to claims 3 through 5 as being dependent upon a rejected base claim, further indicating that they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Representative claim 1 is reproduced below:

1. A filter comprising:

- (a) an input for receiving frames of sampled speech signals;
- (b) an attenuation filter coupled to said input, wherein for each of said frames said attenuation filter uses a noise-free speech power spectrum estimate based on line spectral frequencies (LSFs) in a codebook; and
- (c) an output coupled to said attenuation filter for emitting filtered frames.

The following reference is relied on by the examiner:

Deller, Jr. et al., Discrete-Time Processing of Speech Signals, published by Prentice Hall, Inc. (NJ) (1987), pp. 331-333, 517, 521, 523, 526.

Claims 1, 2 and 6 through 10 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner relies upon Deller alone.

Rather than repeat the positions of the appellants and the examiner, reference is made to the brief and the answer for the respective details thereof.

OPINION

For the reasons set forth by the examiner in the final rejection and the answer, we sustain the rejection of claims 1, 2, 6 and 10, but reverse the rejection for claims 7 through 9.

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The examiner reasons through the noted pages of Deller as applied to the claims on appeal, but recognizes that Deller does not teach the implementation of line spectral coding with the use of a codebook.

As to this feature, the examiner asserts that a codebook implementation of line spectrum frequencies (LSFs) is old and well known in the art of speech processing, since such codebooks have provided an appropriate set of patterns which help minimize overall distortion. For their part, appellants' position at page 3 of their brief merely urges the reversal of the rejection of the claims on appeal because there is no suggestion of the use of a codebook in Deller. It is noted that the feature of this codebook is relied upon as a feature in each of independent claims 1, 7 and 10 on appeal.

As rightly noted by the examiner at page 5 of the answer, appellants have failed to properly address the examiner's contention in the final rejection that such codebook implementation of line LSFs is old and well known in the art of speech processing. On the basis of the absence of any position by appellants as to this assertion by the examiner, we take it as established. Inasmuch as this is the only argued feature with respect to independent claims 1 and 10 on appeal, we sustain the rejection of these claims and dependent claims 2 and 6 which have not been argued by appellants.

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We note in passing that the examiner has provided additional evidence at page 5 of the answer that a codebook implementation of LSFs is old and well known in the art by the citation to specific portions of the art of record that has not been relied upon formally. This merely confirms what appellants have recognized is in the prior art at the bottom of page 2 in the specification as filed anyway.

Although we have sustained the rejection of claims 1, 2, 6 and 10, we reverse the rejection of claims 7 through 9. Appellants' position at page 3 of the brief indicates that claim 7 further explicitly requires the power spectrum estimate to be based upon a weighted sum of LSFs of the codebook. The final rejection on which the examiner relies as a basis of the rejection and the answer both fail to directly address this feature. As such, the examiner has clearly failed to set forth a prima facie case of obviousness of this claim. Therefore, we must reverse the rejection of claim 7 and its respective dependent claims 8 and 9. Although from a mathematical point of view, when estimating from a series of values, it appears to be well known to us to weight them on the basis of their significance, the examiner has provided no evidence of this feature in the art.

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In summary, we have sustained the rejection of claims 1, 2, 6 and 10 on appeal, but have reversed the rejection of claims 7 through 9. Accordingly, the decision of the examiner is affirmed in part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

JAMES D. THOMAS)	
Administrative Patent Judge)	
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)	
)	BOARD OF PATENT
ERROL A. KRASS)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
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)	
ANITA PELLMAN GROSS)	
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