

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ERCAN F. GIGI

Appeal No. 2003-1053
Application No. 09/306,960

ON BRIEF

Before JERRY SMITH, DIXON, and BARRY, **Administrative Patent Judges**.
DIXON, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-6, which are all of the claims pending in this application.

We REVERSE.

Appellant's invention relates to refinement of pitch detection. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A method of determining successive pitch periods/frequencies in an audio equivalent signal; the method comprising:

dividing the audio equivalent signal into a sequence of mutually overlapping or adjacent pitch detection segments;

determining an initial value of the pitch frequency/period for each of the pitch detection segments; and

based on the determined initial value, determining a refined value of the pitch frequency/period;

characterized in that the step of determining a refined value of the pitch frequency/period comprises:

forming a sequence of pitch refinement segments by:

- positioning a chain of time windows with respect to the audio equivalent signal; and

- weighting the signal according to an associated window function of the respective time window;

each pitch refinement segment being associated with at least one of the pitch detection segments;

forming a filtered signal by filtering each pitch refinement segment to extract a frequency component with a frequency substantially corresponding to an initially determined pitch frequency of an associated pitch detection segment; and

determining the successive pitch periods/frequencies from the filtered signal.

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The prior art of record relied upon by the examiner in rejecting the appealed claims is as follows:

Su	5,781,880	Jul. 14, 1998
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Claims 1-6 stand rejected under 35 U.S.C. § 102 as being anticipated by Su.

Rather than reiterate the conflicting viewpoints advanced by the examiner and appellant regarding the above-noted rejections, we make reference to the examiner's answer (Paper No. 13, mailed Apr. 9, 2002) for the examiner's reasoning in support of the rejections, and to appellant's brief (Paper No. 12, filed Feb. 12, 2002) for appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellant's specification and claims, to the applied prior art reference, and to the respective positions articulated by appellant and the examiner. As a consequence of our review, we make the determinations which follow.

Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention. **RCA Corp. v. Applied Digital Data Sys., Inc.**, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). In other words, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of

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ordinary skill in the field of the invention. **Scripps Clinic & Research Found. v. Genentech Inc.**, 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991).

The examiner maintains that Su teaches the invention as recited in independent claims 1 and 6. (Answer at pages 4-6.) The examiner states that appellant's argument concerning the filtering of the refinement segments is missing the point, and that once a signal has been low passed filtered to find the initial pitch lag, the signal stays low pass filtered in the succeeding steps and does not become unfiltered. (Answer at page 6.) While we agree with the examiner about a filtered signal remaining filtered, it is the express language of the claim that appellant has been arguing. The language of independent claims 1 and 6 expressly recite "forming a filtered signal by filtering each pitch refinement segment to extract a frequency component with a frequency substantially corresponding to an initially determined pitch frequency of an associated pitch detection segment." (Emphasis added.) Here, we find that the step of low-pass filtering of Su is with respect to the pitch detection segment and not the pitch refinement segment. Whether the pitch refinement signal remains filtered at this point in the process does not teach filtering after the step of forming the sequence of refinement segments by filtering each refinement segment. Therefore, we agree with appellant that Su does not teach every limitation as recited in independent claims 1 and 6. Therefore, we cannot sustain the rejection of independent claims 1 and 6 and their dependent claims.

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CONCLUSION

To summarize, the decision of the examiner to reject claims 1-6 under 35 U.S.C. § 102 is reversed.

REVERSED

JERRY SMITH)	
Administrative Patent Judge)	
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)	
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)	BOARD OF PATENT
JOSEPH L. DIXON)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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)	
LANCE LEONARD BARRY)	
Administrative Patent Judge)	

JLD:clm

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