Paper No. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DONG-CHANG SHIUE, KUMAR RAMASWAMY, and
PAUL GOTHARD KNUTSON

Appeal No. 2002-1232
Application No. 09/102,885

ON BRIEF

Before BARRETT, RUGGIERO, and DIXON, **Administrative Patent Judges**.

DIXON, **Administrative Patent Judge**.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-16, which are all of the claims pending in this application.

We REVERSE.

BACKGROUND

Appellants' invention relates to an HDTV channel equalizer. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A system for processing a received Vestigial Sideband (VSB) modulated signal containing high definition video information represented by a VSB constellation of symbols and subject to exhibiting unwanted perturbations, comprising:

a demodulator responsive to said received VSB modulated signal for producing a baseband demodulated signal; and

an adaptive equalizer having an input for receiving said baseband demodulated signal and an output at which an equalized baseband signal is produced, said adaptive equalizer including

(a) an adaptive feed forward filter (FFF) for equalizing said demodulated signal, said FFF exhibiting (1) linear, non-decision directed blind operation in a first operating mode, and (2) decision-directed operation in a subsequent second operating mode; and

(b) an adaptive decision feedback filter (DFF) for equalizing said demodulated signal, said DFF exhibiting (1) linear, non-decision directed blind operation in said first operating mode, and (2) non-linear decision-directed operation in said second operating mode.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Strolle et al. (Strolle)	5,799,037	Aug. 25, 1998 (filed Sep. 27, 1996)
Werner et al. (Werner)	6,069,917	May 30, 2000 (filed May 23, 1997)

Claims 1-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Strolle in view of Werner.

Rather than reiterate the conflicting viewpoints advanced by the examiner and appellants regarding the above-noted rejections, we make reference to the final rejection (Paper No. 6, mailed Dec. 6, 2000) and the examiner's answer (Paper No. 9, mailed Jun. 19, 2001) for the examiner's reasoning in support of the rejections, and to appellants' brief (Paper No. 8, filed Mar. 30, 2001) and reply brief (Paper No. 10, filed Jul. 3, 2001) for appellants' arguments thereagainst.

OPINION

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

Appellants argue that independent claims 1, 6, 11, 13, and 16 recite that the demodulator produces a baseband signal and that the adaptive equalizer produces an equalized baseband signal. (See brief at page 3.) Appellants argue that Strolle specifically teaches the use of a passband adaptive equalizer which does not teach or suggest the use of a baseband equalizer. (See brief at page 3.) The examiner maintains that the baseband signal is not easily recovered and that is the reason that the passband or near baseband signal is used. (See final rejection at pages 2-3 and

answer at pages 3-4.) We disagree with the examiner's analysis and conclusion about near baseband and baseband. From our review of the teachings of Strolle, we find that Strolle specifically desires the use of the passband signal for the demodulator and the adaptive equalizer since Strolle teaches at col. 11, lines 45-50, and col. 12, lines 17-18, that the adaptive equalizer operates in the passband signal prior to the recovery of the carrier signal and the remainder of the circuit operates at baseband. From these teachings, we find no support for the examiner's position. With respect to the teachings of Werner, while Werner appears to teach the basic filter configuration, we find no express teaching or suggestion that the system is useful for VSB signals or that it operates at baseband. Therefore, we find that the examiner has not established an initial ***prima facie*** case of obviousness of the claimed invention, and we cannot sustain the rejection of independent claims 1, 6, 11, 13, and 16 and their dependent claims.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1-16 under 35 U.S.C. § 103(a) is reversed.

REVERSED

LEE E. BARRETT Administrative Patent Judge	)
JOSEPH F. RUGGIERO Administrative Patent Judge	) BOARD OF PATENT) APPEALS) AND) INTERFERENCES
JOSEPH L. DIXON Administrative Patent Judge	)

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