

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROLF HEIDEMANN

Appeal No. 95-0609
Application 07/792,851¹

HEARD: July 8, 1996

MAILED

AUG 15 1996

PAT. & T.M. OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

Before HARKCOM, Vice Administrative Patent Judge, and KRASS and BARRETT, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1 through 7, constituting all the claims in the application.

The invention is directed to an optical heterodyne receiver which achieves wider, but still stable, frequency range by using an optical oscillator tunable in steps, i.e.,

¹ Application for patent filed November 15, 1991.

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discontinuously, while employing an IF stage that is continuously tunable.

Independent claim 1 is reproduced as follows:

1. Optical heterodyne receiver comprising

an optical oscillator for providing an oscillator signal, a mixing stage for receiving a received signal as well as the oscillator signal and for providing a difference frequency signal in response thereto, and

an intermediate frequency stage responsive to the difference frequency signal for providing an output signal centered about an intermediate frequency, wherein

the oscillator signal provided by the optical oscillator has an oscillator frequency which is tuneable only discontinuously, in jumps, and

the output signal provided by the intermediate stage has an IF frequency which is tuneable continuously over a predetermined tuning range.

The following references are relied upon by the examiner are:

Okai et al. (Okai)	4,885,753	Dec. 05, 1989
Olshansky et al. (Olshansky)	5,134,509	Jul. 28, 1992
		(Filed Jun. 28, 1990)

Claims 1 through 7 stand rejected under 35 U.S.C. 103 as unpatentable over Olshansky in view of Okai.

Reference is made to the briefs and answers for the respective positions of appellant and the examiner.

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OPINION

We have reviewed the evidence before us and conclude therefrom that the subject matter of instant claims 1 through 7 would not have been obvious within the meaning of 35 U.S.C. 103.

Regarding claim 1, on page 3 of the answer, the examiner identifies, in Olshansky, an optical oscillator, a mixing stage and an IF stage wherein the "IF frequency is tuneable continuously over a predetermined range," noting column 5, lines 48-68 and column 6, lines 18-68 of Olshansky. The examiner recognizes that Olshansky does not specifically disclose an optical oscillator tunable discontinuously but relies on the teaching of Okai [column 1, lines 10-15 and column 3, lines 43-50] for the teaching of an optical oscillator which may be tunable either continuously or discontinuously. The examiner concludes therefrom that, since both references are from the same field of endeavor, it would have been obvious to use the teaching of Okai in the system of Olshansky "in order to have an optical oscillator that is tunable discontinuously in an optical communication system for providing a wide wavelength range" [answer, page 3].

While whether references are in the same field of endeavor is one test for analogous arts and references should be from analogous arts if they are to be combinable in a proper

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rejection under 35 U.S.C. 103, merely because references are from the same field of endeavor, i.e., constitute analogous arts, does not necessarily mean that it would have been obvious, within the meaning of 35 U.S.C. 103, to combine any or all teachings found in these references.

Clearly, Olshansky and Okai are within the same field of endeavor. However, we find no teaching or suggestion therein of combining the discontinuously tunable optical oscillator of Okai with the continuously tunable IF stage of Olshansky and the examiner has not provided us with any convincing rationale as to why the skilled artisan would have been led to make this combination. The examiner's allegation that such a combination would provide "a wide wavelength range" is unconvincing since Okai, alone, teaches such a "wide wavelength range" [column 3, line 46]. Thus, it appears that the artisan would not have expected any advantage from combining a continuously tunable IF stage with the optical oscillator of Okai.

Moreover, instant claim 1 requires that the oscillator frequency be tunable "only discontinuously, in jumps" [emphasis ours]. Support for this claimed limitation appears at pages 5-6 of the instant specification wherein a known semiconductor laser is described as the preferred optical oscillator. The examiner does not allege that there is any lack of enablement in adapting such a laser to be tunable "only discontinuously, in jumps."

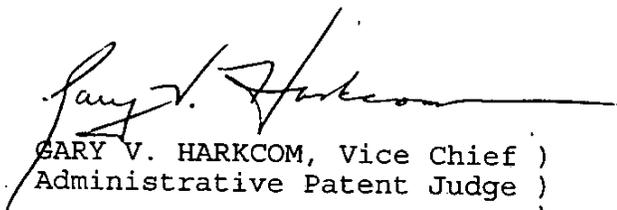
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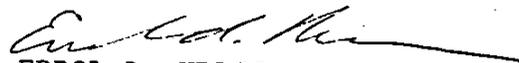
While Okai discloses a semiconductor laser device which "can be varied continuously or discontinuously in a wide wavelength range," it appears that Okai's device is tunable both continuously and discontinuously, as necessary [see column 8, lines 6-14 of Okai] and not only discontinuously, as claimed.

Thus, we find no motivation, in the 35 U.S.C. 103 sense, for modifying the Olshansky oscillator to incorporate an oscillator tunable only discontinuously. Since we find the subject matter of independent claim 1 to have been unobvious in view of the applied references, we also will not sustain the rejection of the dependent claims under 35 U.S.C. 103 based on the same references.

The examiner's decision rejecting claims 1 through 7 under 35 U.S.C. 103 is reversed.

REVERSED


GARY V. HARKCOM, Vice Chief)
Administrative Patent Judge)


ERROL A. KRASS)
Administrative Patent Judge)


LEE E. BARRETT)
Administrative Patent Judge)

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Robbins, Berliner & Carson
201 N. Figueroa, 5th Floor
Los Angeles, CA 90012-2628