

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HELMUT PREISACH

Appeal 2009-003219
Application 10/752,022
Technology Center 2600

Decided:¹ June 30, 2009

Before JOHN C. MARTIN, MAHSHID D. SAADAT,
and CARLA M. KRIVAK, *Administrative Patent Judges*.

KRIVAK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from a final rejection of claims 1-3 and 5.² We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

² Claim 4 is objected to (Final Office Action mailed April 10, 2007).

STATEMENT OF THE CASE

Appellant's claimed invention is an integrated optical transceiver circuit that includes an optical equalizer for a distorted optical/electrical (O/E) converted signal, an adaptive regenerator, and a clock recovery circuit. An embedded processing unit and an integrated programmable memory are also provided. (Spec. 2:18-25) Software algorithms stored in the programmable memory adjust threshold values of the adaptive regenerator (Spec. 2:18-3:2). Because the threshold is adaptively adjusted, optimization with respect to a reduction in bit errors is achieved (Spec. 9:15-27; App. Br. 9).

Independent claim 1, reproduced below, is representative of the subject matter on appeal.

1. An integrated transceiver comprising:

a first equalizer for a distorted O/E-converted optical signal;

an adaptive regenerator coupled to the equalizer;

a clock recovery circuit coupled to the adaptive regenerator;

an embedded processing unit; and

an integrated programmable memory for storing different pieces of software;

wherein said processing unit adjusts threshold values of said adaptive regenerator according to a software algorithm loaded into said memory.

FINDINGS OF FACT

1. Appellant's invention discloses an adaptive regenerator 202 controlled by an embedded micro-controller (CPU) 210). Threshold values of the adaptive regenerator are adjusted according to software loaded in the CPU. (Spec. 5:10-15; generally Spec. 9).

2. Aronson teaches a transceiver that includes dual eye openers and an equalizer. A receiver eye opener extracts a clock from an electrical signal and uses that clock to regenerate degraded data within the signal to remove jitter (¶ [0046]; Fig. 2). A multiplexer (MUX 955g) allows a retimer (RT) to retime data in synchronization with either a reference clock or a clock Tx (¶ [0056]; Fig. 4).

PRINCIPLES OF LAW

A rejection based on § 103 must rest upon a factual basis rather than conjecture or speculation. "Where the legal conclusion [of obviousness] is not supported by facts it cannot stand." *In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967). *See also In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

ANALYSIS

The Examiner rejected claims 1-3 and 5 under 35 U.S.C. § 103(a) based upon the teachings of Aronson. The Examiner finds that the retimer RT 2170 corresponds to Appellant's claimed adaptive regenerator (Advisory Action mailed August 8, 2007). This is the only element under contention.

The Examiner finds that Aronson's RT is an adaptive generator because the RT is adjusted by a rate selected from a multiplexer that receives a reference clock signal (i.e., a threshold value) (Ans. 5; FF 2).

Appellant contends that Aronson receives a reference clock to start retiming data and a Tx clock to retime data in synchronization with the Tx clock (FF 2). These clock signals align the phase of the electrical signal to correctly clock the signal. Thus, the reference clock of Aronson, used to start retiming data, is not the same as a threshold value. That is, threshold signal values are not adjusted; rather it is the Tx clock, which retimes the data according to the data rate, that is adjusted (Reply Br. 8).

It is clear from Aronson that it is a clock signal that is adjusted and not threshold values of an adaptive generator as asserted and claimed by Appellant. Thus, Aronson does not suggest Appellant's claimed invention.

CONCLUSION

Appellant has established the Examiner erred in finding that adjusting a reference clock signal is the same as adjusting threshold values of an adaptive regenerator.

DECISION

The Examiner's decision rejecting claims 1-3 and 5 is reversed.

REVERSED

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SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037