

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(2) is not binding precedent of the Board.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. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte MING-CHIANG LI

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Appeal No. 97-3561  
Application 08/352,190<sup>1</sup>

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ON BRIEF

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Before THOMAS, JERRY SMITH and FLEMING, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

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<sup>1</sup> Application for patent filed December 01, 1994.  
According to the appellant, this application is a continuation  
of Application 08/185,177, filed January 24, 1994, which is a  
continuation of Application 08/018,388, filed February 17,  
1993.

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This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1-20, which constitute all the claims in the application. An amendment after final rejection was filed on August 16, 1996 but was denied entry by the examiner.

The invention pertains to an interferoceiver and a method for operating an interferoceiver. More particularly, an RF signal train generator is provided with one or more RF delay loops. The RF delay loops store received RF signals, generate replicas of the stored signals, and align and vary the alignments of the regenerated replicas.

Representative claim 1 is reproduced as follows:

1. An interferoceiver comprising an RF signal train generator; wherein the RF signal train generator comprises one or more RF delay loops; wherein the RF signal train generator further comprises means for receiving RF signals from a source; wherein the RF delay loops comprise means for storing received RF signals, for regenerating replicas of stored RF signals, for aligning and varying alignments of regenerated replicas.

The examiner relies on the following references:

Weverka 1992	5,144,468	Sep. 01,
Kiasaleh 1994	5,319,438	June 07,
Lipsky	5,331,453	July 19,



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into consideration, in reaching our decision, the appellant's arguments set forth in the briefs along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the disclosure in this application describes the claimed invention in a manner which complies with the requirements of 35 U.S.C. § 112. We are also of the view that the inventions of claims 1, 9 and 17 are not fully met by any of the disclosures of Weverka, Kiasaleh or Lipsky. We are further of the view that the collective evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 2-8, 10-16 and 18-20. Accordingly, we reverse.

We consider first the rejection of claims 1-20 under the first paragraph of 35 U.S.C. § 112. The final rejection indicated that the disclosure was enabling only for claims limited to an RF signal train generator and interferoceiver which is optical fiber based [page 2]. In the answer the

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examiner observes that "Appellant has failed to point out exactly where in the original specification provides support for a non-optical fiber based RF signal train generator and interferoceiver"

[page 5].

We note that the claims do not recite that the RF generator and interferoceiver are non-optical fiber based, but rather, recite these elements generically, that is the claims include within their scope both optical fiber based elements and non-optical fiber based elements. Appellant has disclosed as the preferred embodiment an optical fiber based system. The examiner has not questioned that this more specific embodiment is adequately disclosed. The examiner's rejection is tantamount to a rejection of these claims on undue breadth.

With respect to the examiner's request that appellant point to support in the disclosure for a non-optical fiber based system, appellant points to page 15 of the specification wherein it is stated:

As the technology evolves, instead of optical fibers, new means may become available to us for designing new

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variations of RF signal train  
generators and interferoceptors. Thus  
the scope of the invention should be  
determined by appended claims and  
their legal equivalent, rather [than]  
by the examples presented here.

The examiner has not responded to the merits of appellant's  
position in relying on this portion of the specification for  
disclosure support under 35 U.S.C. § 112.

We will not sustain this rejection. The examiner  
does not contest that the disclosure satisfies 35 U.S.C. § 112  
for the invention using optical fiber based elements. We are  
aware of no requirement that forces appellant to narrow his  
claimed invention to be commensurate in scope with the  
preferred embodiment. In fact, the general rule is that an  
inventor can claim his invention as broadly as the prior art  
permits. Additionally, the examiner's only rationale in  
support of this rejection is rebutted by the specification as  
noted by appellant in the reply brief. The examiner has  
offered no response to appellant's reply brief, and we find  
appellant's position to be legally and factually correct.

We now consider the rejection of claims 1, 9 and 17  
under 35 U.S.C. § 102 as anticipated by the disclosure of

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Weverka, Kiasaleh or Lipsky. 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 as well as disclosing structure which is capable of performing the recited functional limitations. RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.); cert. dismissed, 468 U.S. 1228 (1984); W.L. Gore and Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

The examiner never reads independent claims 1, 9 and 17 on the prior art references so that we are not certain how the examiner finds anticipation. The initial rejection simply stated that each of the applied references disclosed an interferometer having an optical fiber, delay loops and means for generating replicas of the delayed signals. The final rejection observed that appellant's arguments were not commensurate with the scope of the claims, and the examiner argued that each of the references show an interferoceiver comprising optical fiber loops. The examiner's answer added nothing to the record with respect to the rejections under 35

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U.S.C. § 102.

Appellant's initial appeal brief did not respond to any prior art rejections. A reply brief was filed by appellant which was entered by the examiner with a statement that "no further response by the examiner is deemed necessary" [Paper No. 14]. The reply brief contains arguments by appellant as to why the disclosures of Weverka, Kiasaleh and Lipsky do not anticipate the claimed invention.

With respect to Weverka, appellant argues that there is no apparatus to regenerate replicas from a signal pulse. Appellant also argues that the dither means of Weverka are not RF delay loops. Finally, appellant argues that there is no structure in Weverka for aligning and varying the alignments of regenerated replicas as recited in the claims. With respect to Kiasaleh, appellant argues that there is no apparatus to regenerate replicas from a signal pulse. Appellant also argues that Kiasaleh's phase shifting delay loop does not have the alignment capabilities recited in the claims. With respect to Lipsky, appellant argues that Lipsky does not teach or suggest any delay loops or anything resembling a delay loop. Appellant also argues that there is

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no structure in Lipsky for aligning and varying the alignments of regenerated replicas as recited in the claims. The examiner has not responded to any of these arguments made by appellant in the reply brief.

We will not sustain any of the examiner's rejections under 35 U.S.C. § 102. The examiner's rejection seems to assert that any optical interferometer in which two paths, one having a delay and one not, are compared to each other meets the claimed invention. We do not agree. The path delays in the applied prior art are not capable of storing received RF signals, regenerating replicas of these signals, and aligning and varying the alignment of regenerated replicas. At best the applied prior art shifts signals based on a comparison between an undelayed signal and a delayed signal, but there is no disclosure of varying the alignments of the regenerated replicas. Appellant has presented compelling analysis that the claimed delay loops are not disclosed by Weverka, Kiasaleh or Lipsky, and the examiner has offered nothing in rebuttal. Therefore, we do not sustain this rejection of the claims.

Claims 2-8, 10-16 and 18-20 have been rejected under

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35 U.S.C. § 103 as being unpatentable over Weverka, Kiasaleh or Lipsky in view of Shaw. Weverka, Kiasaleh and Lipsky are relied on in the same manner as in the rejection under Section 102. For reasons discussed above, the examiner's findings as to what is disclosed by these references is incorrect. Shaw does not overcome the deficiencies in each of the primary references. There are differences between the claimed invention and the applied prior art which have not been addressed by the examiner. Therefore, the examiner has failed to establish a prima facie case of obviousness. Accordingly, we do not sustain the examiner's rejection of these claims.

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In summary, we have not sustained any of the examiner's rejections of the claims. Therefore, the decision of the examiner rejecting claims 1-20 is reversed.

REVERSED

	)	
James D. Thomas	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
Jerry Smith	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
Michael R. Fleming	)	
Administrative Patent Judge	)	

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