

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. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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**Ex parte** GUY VACHON LABORDE

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Appeal No. 2002-0859  
Application 09/193,444

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ON BRIEF

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Before FLEMING, DIXON, and SAADAT, **Administrative Patent Judges**.

FLEMING, **Administrative Patent Judge**.

**DECISION ON APPEAL**

This is a decision on appeal from the final rejection of claims 1 through 10, 12 through 16, 18 through 24, and 26 through 29. Claims 11, 17, and 25 have been canceled.

### **Invention**

The invention relates to communications systems having redundant channels used in wells. See page 1 of Appellant's specification. Figure 1 is a block diagram of a system in a well having multiple nodes coupled over a communications link. Figures 2A and 2B illustrate a communications systems according to one embodiment having redundant communications links. See page 2 of Appellant's specification. Referring to Figure 1, the communications system according to an embodiment of the invention for use with well 18 is shown. The communications system includes a surface node 200 coupled to multiple downhole nodes in the well 18, illustrated as five nodes 202, 204, 206, 208, and 210. The communications link 21 coupling nodes 200, 202, 204, 206, 208 and 210 have one or more redundant channels. See page 3 of Appellant's specification. Referring to Figures 2A and 2B, one illustrative configuration of how elements in a communications system contain redundant channels may be inter-coupled is shown. In Figure 2A, the communications system includes five nodes 202, 204, 206, 208, and 210 coupled in a loop by corresponding channels. A channel 212 couples nodes 202 and 204, a channel 214 couples nodes 204 and 206, channel 216 couples nodes 206 and 208, and a channel 218 couples nodes 208 and 210.

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As redundancy, a further channel 220 couples the bottom node 210 to another node upstream, which may be a surface device, for example. See page 4 of Appellant's specification.

Independent claim 1 present in the application is representative of the claimed invention and is reproduced as follows:

1. A system for use in a well having completion zones, comprising:

a surface node;

a plurality of downhole nodes positioned in the completion zones; and

a communications link extending into the well and coupled to the surface node and downhole nodes, the communications link including channels coupling successive nodes, the surface node and downhole nodes coupled in a loop by the channels.

#### **References**

The references relied on by the Examiner are as follows:

Gerstel et al. (Gerstel)	5,793,746	Aug. 11, 1998
Tubel et al. (Tubel)	5,959,547	Sep. 28, 1999
		(Filed Sep. 17, 1997)

#### **Rejection at Issue**

Claims 1 through 10, 12 through 16, 18 through 24, and 26 through 29 stand rejected under 35 U.S.C. § 103 as being unpatentable over Tubel in view of Gerstel.

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Throughout our opinion, we will make reference to the briefs<sup>1</sup> and answer for the respective details thereof.

#### OPINION

With full consideration being given to the subject matter on appeal, the Examiner's rejection and the arguments of Appellant and the Examiner, for the reasons stated **infra**, we reverse the Examiner's rejection of claims 1 through 10, 12 through 16, 18 through 24, and 26 through 29 under 35 U.S.C. § 103.

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a **prima facie** case of obviousness. **In re Oetiker**, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). **See also In re Piasecki**, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. **In re Fine**, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Only if this initial burden is met does the burden of coming

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<sup>1</sup> Appellant filed an appeal brief on August 9, 2001. Appellant filed a reply brief on January 29, 2002. On February 13, 2002, the Examiner mailed an Office Communication stating that the reply brief has been entered.

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forward with evidence or argument shift to the Appellant.

**Oetiker**, 977 F.2d at 1445, 24 USPQ2d at 1444. **See also Piasecki**, 745 F.2d at 1472, 223 USPQ at 788.

An obviousness analysis commences with a review and consideration of all the pertinent evidence and arguments. "In reviewing the [E]xaminer's decision on appeal, the Board must necessarily weigh all of the evidence and argument." **Oetiker**, 977 F.2d at 1445, 24 USPQ2d at 1444. "[T]he Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." **In re Lee**, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002).

Appellant argues that there is no suggestion to combine Tubel and Gerstel to achieve the combination of Appellant's claims. Appellant argues that Tubel teaches a downhole communication system that achieves reliability without the need of redundancy. Without this need, there is no need for or motivation or suggestion in Tubel for a communication link having channels to couple downhole nodes into a loop. Appellant also argues that although Gerstel described a fault-tolerant multichannel multiplexer ring configuration to bypass failed

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links, there is no suggestion that such a technique can be used in a well system having a surface node and downhole nodes. See pages 11 through 13 of the brief and Appellant's reply brief.

When determining obviousness, "[t]he factual inquiry whether to combine references must be thorough and searching." **Lee**, 277 F.3d at 1343, 61 USPQ2d at 1433, **citing McGinley v. Franklin Sports, Inc.**, 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001). "It must be based on objective evidence of record." **Id.** "Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.'" **In re Dembiczak**, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617. "Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact." **Dembiczak**, 175 F.3d at 1000, 50 USPQ2d at 1617, **citing McElmurry v. Ark. Power & Light Co.**, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993).

The Federal Circuit reviews the Board's ultimate conclusion of obviousness without deference, and the Board's underlying factual determinations for substantial evidence. **In re Huston**, 308 F.3d 1267, 1276, 64 USPQ2d 1801, 1806 (Fed. Cir. 2002) **citing**

**In re Gartside**, 203 F.3d 1305, 1316, 53 USPQ2d 1769, 1776 (Fed. Cir. 2000). "The Board's findings must extend to all material facts and must be documented on the record, lest the 'haze of so-called expertise' acquire insulation from accountability." **Lee**, 277 F.3d at 1345, 61 USPQ2d at 1435.

We find that Tubel's Figure 9 is a block diagram of an exemplary downhole network. Each downhole control system 22 is connected to a network 410. The network 410 is implemented using cable or wireless communications. A bus master 400 monitors the network traffic on the network 410. The bus master 400 will arbitrate between various downhole control systems to prevent data collision. See column 20, lines 9 through 39. Thus, Tubel teaches a bus communication system where the bus master 400 controls the communication between each of the nodes 22 connected onto the bus 410. We fail to find that Tubel teaches any need for the redundancy of the bus 410. In fact, Tubel teaches the use of a wireless bus which would not require redundancy.

Gerstel, on the other hand, teaches a Fault-Tolerant Multichannel Multiplexing Ring Configuration. See column 1, lines 1 through 19. Gerstel is dealing with the problem of how to handle failures in a ring network. See column 1, line 20, through column 2, line 7. We fail to find anything in Gerstel

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that teaches the advantages of using a ring over the advantages of using a bus communication system. Therefore, we fail to find that the Examiner has provided substantial evidence as to why one of ordinary skill in the art would make the proposed combination of substituting Tubel's reliable bus communication system with Gerstel's ring communication system.

In view of the foregoing, we have not sustained the Examiner's rejection of claims 1 through 10, 12 through 16, 18 through 24, and 26 through 29 under 35 U.S.C. § 103.

**REVERSED**

MICHAEL R. FLEMING	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
JOSEPH L. DIXON	)	
Administrative Patent Judge	)	APPEALS AND
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	)	INTERFERENCES
	)	
MAHSHID SAADAT	)	
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