

The opinion in support of the decision being entered today was **not** written for publication in a law journal and is **not** binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MAURICE GILBERT LE VAN SUU

Appeal No. 1998-1105
Application No. 08/300,599

ON BRIEF

Before KRASS, FLEMING, and BARRY, Administrative Patent Judges.
BARRY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the rejection of claims 1-7 and 13-16. We reverse.

BACKGROUND

The invention at issue in this appeal relates to error detection and correction of messages transmitted in a home automation system. Such a system features controllers and appliances to be controlled (e.g., televisions, refrigerators) distributed over the power lines or mains of a home. Messages

are transmitted from the controllers to the appliances over the power mains.

Unfortunately, the power mains are the sites of the two types of electrical disturbances that can affect the transmission quality of a message. First, recursive parasitic pulses deform the bits that form the messages. Second, variations in the line impedance of an installation attenuate the amplitude of the entire message. Either type of disturbance prevents a receiver from understanding the messages.

The invention aims to improve the accuracy of messages transmitted on a transmission line supplied by the mains system. More specifically, the cause of an error (viz., parasitic pulses or line attenuation) is first determined. Once the cause is known, subsequent messages can be sent at different transmission rates and, if necessary, synchronously with the frequency of the mains.

Claim 13, which is representative for our purposes,
follows:

13. A method for communicating over mains power
lines

which carry AC power at a known power line
frequency, comprising the steps of:

- (a) initially transmitting a message over the
mains power lines at a first bit rate,
without synchronization to the power line
frequency; and
- (b) if no acknowledgment is received after said
step (a), then retransmitting at least
part of the message, at a second bit
rate which is lower than said first
bit rate, with error correction coding
and with synchronization to the power
line frequency.

The references relied on in rejecting the claims follow:

Baker	4,479,215	Oct. 23, 1984
Clark et al. (Clark)	4,829,526	May 9, 1989
Sargeant et al. (Sargeant)	5,491,463	Feb. 13, 1996.

Claims 1-7 and 13-16 stand rejected under 35 U.S.C. § 103(a)
as obvious over Baker in view of Clark further in view of
Sargeant. Rather than repeat the arguments of the appellant

or examiner in toto, we refer the reader to the briefs and answer for the respective details thereof.¹

OPINION

In deciding this appeal, we considered the subject matter on appeal and the rejection advanced by the examiner.

Furthermore, we duly considered the arguments and evidence of the appellant and examiner. After considering the totality of the record, we are persuaded that the examiner erred in rejecting claims 1-7 and 13-16. Accordingly, we reverse.

¹As an aside, we observe the appellant's incorporation by reference of details of a recognition circuit. Specifically, "[t]his circuit, which is indispensable for devices working at several transmission rates, is described in detail in the European patent application No. 93 40123.1, which is hereby incorporated by reference." (Spec. at 13.) "In any application which is to issue as a U.S. patent, essential material may not be incorporated by reference to (1) patents or applications published by foreign countries or a regional patent office ... or (4) a foreign application." M.P.E.P. § 608.01(p). So as not to offend this prohibition, the appellant may amend the specification to include the material incorporated by reference. Id.

We begin by noting the following principles from In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993).

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).... "A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." In re Bell, 991 F.2d 781, 782, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)). If the examiner fails to establish a prima facie case, the rejection is improper and will be overturned. In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

With these principles in mind, we address the appellant's argument and the examiner's response.

The appellant argues, "Baker does NOT appear to disclose or suggest varying the transmission (baud) rate of the messages to ensure that messages are received." (Appeal Br. at 7.) The examiner responds, "'frequency' and 'rate' are essentially the same" (Examiner's Answer at 7.)

"Claims are not interpreted in a vacuum, but are part of and are read in light of the specification." Slimfold Mfg. Co. v. Kinkead Indus., Inc., 810 F.2d 1113, 1116, 1 USPQ2d 1563, 1566 (Fed. Cir. 1987) (citing Hybritech Inc. v. Monoclonal Anti-bodies, Inc., 802 F.2d 1367, 1385, 231 USPQ 81, 94-95 (Fed. Cir. 1986); In re Mattison, 509 F.2d 563, 565, 184 USPQ 484, 486 (CCPA 1975)). Here, claims 1 and 4 each specifies in pertinent part the following limitations:

- a) the sending, by the transmitter, at a first transmission rate, of the message to be transmitted with a request for acknowledgment from the receiver,

- b) when there is no acknowledgment owing to said disturbances, the sending, by the transmitter, at another transmission rate, of a correction message

Similarly, claims 2, 3, 5, and 6 each specifies in pertinent part the following limitations:

- a) the transmission, by the transmitter, at a first transmission rate, of the message to be transmitted with a request for acknowledgment from the receiver;

- b) when there is no acknowledgment because of said disturbances, the transmission, by the transmitter, at another transmission rate, of a correction message

Also similarly, claim 7 specifies in pertinent part the following limitations:

- a) a transmitter sends a control message at a first transmission rate, requesting acknowledgment of said control message;
- b) if no acknowledgment is received, said transmitter sends a new correction message ... at a new transmission rate

Further similarly, claims 13 and 14 each specifies in pertinent part the following limitations:

- (a) initially transmitting a message over the mains power lines at a first bit rate, without synchronization to the power line frequency; and
- (b) if no acknowledgment is received after said step (a), then retransmitting at least part of the message, at a second bit rate which is lower than said first bit rate

Similarly, claims 15 and 16 each specifies in pertinent part the following limitations:

- (a) initially transmitting a message over the mains power lines at a first carrier frequency and at a first bit rate, without synchronization to the power line frequency; and
- (b) if no acknowledgment is received after said step (a), then retransmitting at least part of the message, at a second carrier frequency which is different from said first carrier frequency and at a second bit rate which is lower than said first bit rate

The specification expresses the claimed transmission rate in "baud." (Spec. at 2.) In the appeal brief, furthermore, the appellant uses the terms "transmission rate" and "baud rate" interchangeably, (Appeal Br. at 7 ("Baker does NOT appear to disclose or suggest varying the transmission (baud) rate of the messages"), and offers to amend the claims to recite "baud rate" rather than "transmission rate." (Id.) Reading the claims in light of the specification, the limitations of claims 1-7 and 13-16 each requires sending messages at different baud rates.

The examiner fails to show a suggestion of the limitations in the prior art. "Obviousness may not be established using hindsight or in view of the teachings or suggestions of the inventor." Para-Ordnance Mfg. v. SGS Importers Int'l, 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995)(citing W.L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1551, 1553, 220 USPQ 303, 311, 312-13 (Fed. Cir. 1983)). "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the

desirability of the modification." In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992) (citing In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)). "It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." Id. at 1266, 23 USPQ2d at 1784, (citing In re Gorman, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991)).

Here, the examiner admits that Baker teaches sending messages at different carrier frequencies. He specifically admits, "Baker teaches a power-line-carrier communications system; wherein, a message to be sent is transmitted on a plurality of frequencies." (Examiner's Answer at 6.) The reference confirms the admission by disclosing "a power-line-carrier (PLC) communications system which dynamically avoids bands of interference, by slow frequency hopping of the carrier signal" Col. 2, ll. 54-57.

Despite this teaching, the examiner alleges, "'frequency' and 'rate' are essentially the same" (Examiner's Answer at 7.) The prior art belies the allegation. A frequency is a "rate of signal oscillation in hertz." Jerry M. Rosenberg, Dictionary of Computers, Information Processing, and Telecommunications 249 (2d ed. 1987) (copy attached).

In contrast, a baud is "a unit of signaling speed equal to the number of discrete conditions or signal events per second," Rosenberg, at 50 (copy attached); a baud rate is "the transmission rate that is in effect synonymous with signal events, usually bits per second." (Id.) Accordingly, the claimed transmission or baud rate is a rate of signal events per second. Comparison of these definitions evidences that the carrier frequency varied in Baker is distinct from the transmission rate varied in the claims. Baker evidences the distinction by referring to the turning on or off of the carrier frequency during a bit time interval, col. 3, ll. 50-54, which are discrete signal events. The examiner fails to allege, let alone show, that Clark and Sargeant remedy the defects of Baker.

Because Baker teaches varying a carrier frequency rather than varying a baud rate, we are not persuaded that teachings from the prior art would have suggested the limitations of "the sending, by the transmitter, at another transmission rate, of a correction message"; "the transmission, by the transmitter, at another transmission rate, of a correction message"; "said transmitter sends a new correction message ... at a new transmission rate"; "retransmitting at least part of the message, at a second bit rate which is lower than said first bit rate"; or "retransmitting at least part of the message ... at a second bit rate which is lower than said first bit rate" The examiner fails to establish a prima facie case of obviousness. Therefore, we reverse the rejections of claims 1-7 and 13-16 as obvious over Baker in view of Clark further in view of Sargeant.

CONCLUSION

In summary, the rejection of claims 1-7 and 13-16 under 35 U.S.C. § 103(a) as obvious over Baker in view of Clark further in view of Sargeant.

REVERSED

ERROL A. KRASS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
MICHAEL R. FLEMING)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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LANCE LEONARD BARRY)	
Administrative Patent Judge)	

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Christopher F. Regan
Allen, Dyer, Doppelt, Milbrath & Gilchrist
P.A., P.O. Box 3791
Orlando, Florida 32802-3791