

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RAIMO KIVARI and SEPPO E. SALOW

Appeal No. 96-3372
Application No. 07/823,153¹

HEARD: June 11, 1999

Before MARTIN, JERRY SMITH, and DIXON, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 8-18, which constitute all the claims remaining in the application. An amendment

¹ Application for patent filed January 21, 1992.

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after final rejection was filed on August 23, 1995 and was entered by the examiner.

The disclosed invention pertains to a synchronous and continuous data decoding circuit for use in a mobile phone. Data is sent to the mobile phone in a frame of data which includes at least five repeated data blocks. A 3/5 voting logic circuit produces bit-wise voting results during the time that the fifth repeated data block is received. A decoding circuit receives the bit-wise voting results on a bit-by-bit basis and creates correction information during the first repeated data block of the next frame of data. In this manner corrected data is available in near real time after the reception of the final repeated block of data.

Representative claim 8 is reproduced as follows:

8. A synchronous and continuous data decoding circuit in a mobile phone for performing three-out-of-five (3/5) voting on each of a plurality of data frames, each of said plurality of data frames comprising at least five repeated data blocks, the data decoding circuit comprising:

a 3/5 voting logic circuit which receives a first frame of repeated data blocks when a bit enable signal is enabled, the 3/5 voting logic circuit including means for performing 3/5 voting on the at least five repeated data blocks in the first frame to produce a bit-wise voting result during the fifth data block of said at least five repeated

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data blocks in the first frame, the 3/5 voting logic circuit also including means for storing the bit-wise voting result;

a decoding circuit which receives on a bit-by-bit basis the bit-wise voting result from the 3/5 voting means of the 3/5 voting logic circuit and generates a first frame syndrome at the end of the fifth data block of the first frame, the decoding circuit also creating first frame correction information during the first repeated data block of a second frame;

a correction circuit which receives the first frame syndrome and the correction information from the decoding circuit during the first repeated data block of the second frame and produces a decoding result and a bit correction signal; and

a data buffer which receives during the first repeated data block of the second frame the bit-wise voting result from the 3/5 voting logic circuit and the bit correction signal from the correction circuit, the data buffer utilizing the bit correction signal to correct the bit-wise voting result to produce corrected data which is loaded into the data buffer and subsequently output as a corrected first frame data stream during the first repeated data block of the second frame.

The examiner relies on the following references:

Shishikura et al. (Shishikura)	4,675,868	June 23, 1987
Kikuchi	4,794,601	Dec. 27, 1988
Sharpe et al. (Sharpe)	4,965,820	Oct. 23, 1990

Claims 8-18 stand rejected under 35 U.S.C. § 103. As evidence of obviousness the examiner offers Sharpe in view of Kikuchi and Shishikura. A rejection of claims 8-18 under the

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second paragraph of 35 U.S.C. § 112 has been withdrawn by the examiner [answer, page 2].

Rather than repeat the arguments of appellants or the examiner, we make reference to the brief and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the brief along with the examiner's rationale in support of the rejection and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of

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ordinary skill in the art the obviousness of the invention as set forth in claims 8-18. Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed.

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Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

With respect to independent claim 8, the examiner basically finds that Sharpe teaches all the features of claim 8 except for the bit-by-bit voting before the decoding operation and the data buffer. The examiner cites Kikuchi as teaching a majority voting circuit done on a bit-by-bit basis before decoding. The examiner cites Shishikura as teaching the claimed data buffer. The examiner concludes that it would have been obvious to the artisan to use Kikuchi's voter circuit and Shishikura's error correction circuit in Sharpe's cellular telephone [final rejection, pages 5-7].

Appellants basically rely on a single argument for overturning the examiner's rejection. Specifically, appellants argue that none of Sharpe, Kikuchi or Shishikura teaches or suggests the decoding of data on a continuous bit-by-bit basis before all of the data has been received. According to appellants, Kikuchi clearly states that all the bits are received before they are applied to the voting

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circuit [brief, pages 6-7]. Thus, appellants basically argue that the timing of the voting and decoding in claim 8 is not taught or suggested by the prior art applied by the examiner.

The examiner responds that Kikuchi's voter circuit takes a vote on a "bit-by-bit basis" and sends the results to decoding circuits on a bit-by-bit basis [answer, pages 3-4].

Although Kikuchi does use the term "bit-by-bit basis" [column 4, line 31], Kikuchi does not meet the language of independent claim 8. The voting in Kikuchi is done on a bit-by-bit basis but not until all of the data has been received as argued by appellants. On the other hand, claim 8 specifically requires that the voting take place on a bit-wise basis "during the fifth data block," that the first frame correction information be created "during the first repeated data block of a second frame," and that the correction circuit receive the correction information "during the first repeated data block of the second frame." Although the functions of using 3/5 majority voting logic, decoding the voting result and correcting the data are performed in some manner by the prior art applied by the examiner, the functions are not performed in the timing specifically required by independent

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claim 8. Since the examiner has not demonstrated that the specific timing recited in claim 8 is taught or suggested by the collective teachings of the prior art, the examiner has failed to establish a prima facie case of the obviousness of independent claim 8.

Therefore, we do not sustain the rejection of independent claim 8. Since claims 9-18 all depend from claim 8 and include the limitations of claim 8, we also do not sustain the rejection of these claims. Accordingly, the decision of the examiner rejecting claims 8-18 is reversed.

REVERSED

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