

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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THOMAS M. KING, THOMAS RICKS, and DAVID MURRAY

Appeal 2006-1385
Application 10/452,753
Technology Center 3600

Decided: February 23, 2007

Before STUART S. LEVY, ROBERT E. NAPPI, and LINDA E. HORNER
Administrative Patent Judges.

STUART S. LEVY, *Administrative Patent Judge.*

DECISION ON APPEAL

This appeal pursuant to 35 U.S.C. § 134 involves claims 1-19 and 23-26, the only claims pending in this application. We have jurisdiction over the appeal 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

BACKGROUND

The Appellants' invention relates to the detection and reduction of periodic jamming signals in GPS receivers (Specification 1). An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A method in a satellite positioning system receiver, the method comprising:

detecting the presence of a jamming signal in the satellite positioning system receiver after the jamming signal enters the satellite positioning system receiver;

the jamming signal having a known pattern;

reducing the jamming signal by blanking the satellite positioning system receiver with a blanking signal having a pattern similar to the jamming signal synchronized with the jamming signal.

PRIOR ART

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Shridhara	6,448,925	Sep. 10, 2002
Fielder	6,681,181	Jan. 20, 2004 (May 20, 2002)
Beesley (Great Britain)	2,113,047 A	Jul. 27, 1983

REJECTIONS

Claims 1-19 and 23-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley.

Appeal Number: 2006-1385
Application Number: 10/452,753

Claims 1-19 and 23-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shridhara in view of Fielder.

Rather than reiterate the conflicting viewpoints advanced by the Examiner and the Appellants regarding the above-noted rejections, we make reference to the Examiner's Answer (mailed November 10, 2005) for the reasoning in support of the rejection, and to Appellants' brief (filed August 26, 2005) and reply brief (filed January 10, 2006) for the arguments thereagainst.

Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not to make in the brief have not been considered. See 37 C.F.R. § 41.37(c)(1)(vii)(eff. Sept. 13, 2004).

OPINION

In reaching our decision in this appeal, we have given careful consideration to the Appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the Appellants and the Examiner. As a consequence of our review, we make the determinations that follow.

We begin with the rejection of claims 1-19 and 23-26 under 35 U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley. We note as background that 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

Appeal Number: 2006-1385
Application Number: 10/452,753

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. 1988); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985); *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. 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). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole. *See id.*; *In re Hedges*, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and *In re Rinehart*, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976).

Regarding claim 1, the Examiner's position (Answer 3-5) is that Shridhara does not disclose a jamming signal having a known pattern and a blanking signal having a pattern similar to the jamming signal and synchronized with the jamming signal. To overcome this deficiency of Shridhara, the Examiner turns to Beesley for a teaching of a jamming signal having a known pattern and reducing the jamming signal with a blanking signal having a pattern similar to and synchronized with the jamming signal (*id.*).

Appellants assert (Br. 5) that neither Shridhara nor Beesley show a blanking signal having a pattern similar to the jamming signal and synchronized with the jamming signal. Appellants further argue (*id.*) that there is no reason to combine Shridhara and Beesley. According to Appellants, “there is no need to generate a variable amplitude/duration blanking signal as disclosed by Beesley, since Shridhara teaches turning off the receiver or suppressing GPS readings or notifying the user that the GPS position determination may be inaccurate in the presence of a jamming signal” (*id.*). Additionally, Appellants assert that Beesley does not teach a jamming signal having a known pattern due to the random nature of noise generated by an ignition system (*id.*).

Accordingly, the issue before us is whether the combined teachings and suggestions of Shridhara and Beesley would have taught or suggested to an artisan a jamming signal having a known pattern and reducing the jamming signal with a blanking signal having a pattern similar to the jamming signal and synchronized with the jamming signal, as recited in claim 1.

From our review of the record, we find that Shridhara is directed to a method for jamming detection and blanking for GPS receivers (col. 1, ll. 1-2). Shridhara discloses detecting the presence of a jamming signal in the GPS receiver using any one of several methods (Fig. 9). These methods include analyzing a rise in the output from a correlator chain within the GPS unit (col. 4, ll. 34-36), determining if clock drift is present without a corresponding increase in temperature (col. 4, ll. 46-48), detecting sudden changes in signal to noise ratio (col. 4, ll. 53-55), and monitoring received signal strength to determine a sudden increase (col. 8, ll. 30-31). Shridhara characterizes the jamming signal as noise that is generated from a

variety of sources including vehicle ignition systems (col. 10, ll. 20-29). Shridhara further explains that once the jamming signal is detected, one or more “countermeasures” are applied to reduce the effects of the jamming signal (col. 4, ll. 26-31). Although Shridhara’s countermeasures include disabling the GPS receiver input/output, notifying the user of the jamming signal, or applying alternative position determination methods (col. 4, ll. 58-67), we do not find any suggestion for reducing the jamming signal with a blanking signal having a pattern similar to and synchronized with the jamming signal.

Turning to Beesley, we find that the reference is directed to noise blanking in a radio receiver (p. 1, ll. 1-6). Beesley discloses a blanking signal that controls a blanking circuit—an attenuator—for reducing the effects of noise pulses due to a vehicle’s ignition system (p. 1, ll. 7-10). Beesley explains that a pulse detector detects the presence of a jamming (noise) signal in the received signal (p. 1, ll. 81-84). After detection, the pulse detector determines certain characteristics of the jamming signal, including the amplitude (p. 2, ll. 51-53) and rate of arrival (p. 3, ll. 104-107). A blanking signal is then generated based on these characteristics (p. 1, ll. 56-61). Beesley explains that the purpose of generating a blanking signal based on the characteristics of the jamming signal is to produce an optimized blanking signal that effectively reduces the jamming signal (page 2, lines 82-87).

From our review of Beesley, we agree with the Examiner that Beesley teaches a blanking signal having a pattern similar to a jamming signal. The two signals are similar because the amplitude of the blanking signal is adjusted depending upon the amplitude of the detected jamming signal.

We further find that Beesley teaches generating a blanking signal synchronized with the jamming signal. Beesley explains that the blanking signal is generated in response to the detected presence of the jamming (noise) signal (p. 2, ll. 22-26). Beesley further explains that the duration and amplitude of the blanking signal is dependent upon the amplitude and rate of arrival respectively, of the detected jamming signal (p. 2, ll. 22-26 and p. 3, ll. 104-107). Thus, we agree with the Examiner that Beesley discloses generating a blanking signal that is not only similar to the jamming signal, but also synchronized with the jamming signal.

We are not persuaded by Appellants' assertion (Br. 5) that there is no reason to combine Shridhara and Beesley. Appellants argue that there is no need to generate the blanking signal, as disclosed by Beesley, in Shridhara because Shridhara either turns off the receiver, suppresses GPS readings, or notifies the user (*id.*). However, Shridhara does not limit the type of countermeasures to the ones described by Appellants. Instead, Shridhara explains that "various jamming countermeasures may be applied depending on the application in which the GPS receiver is embedded" (col. 12, l. 66 to col. 13, l. 1).

From this disclosure of Shridhara, we find a suggestion of applying alternative jamming countermeasures. As noted by the Examiner (Answer 5), Beesley teaches a known alternative jamming countermeasure for reducing the effects of a detected jamming signal in a receiver. From our review of Shridhara and Beesley, we agree with the Examiner that it would have been obvious for an artisan to substitute one of the jamming countermeasures in Shridhara with the one taught by Beesley, which includes generating a blanking signal similar to and synchronized with the jamming signal, in order to suppress the adverse effects of the jamming signal.

Nor are we persuaded by Appellants' assertion (Br. 5) that "in Beesley, the noise generated by the ignition system is random and thus does not have a 'known pattern'." The fact that noise is random does not necessarily mean that the noise does not have a known pattern for the following reasons. It depends on whether the pattern of the random noise must be known beforehand—predetermined—or can be known after the noise is detected. Here, claim 1 merely recites a "jamming signal having a known pattern." Claim 1 does not require however, that the jamming signal have a known pattern that is predetermined. In Beesley, the pattern of the jamming signal becomes known once it is detected by the pulse detector and the amplitude and rate of arrival of the jamming signal are determined. Therefore, we agree with the Examiner that Beesley discloses a jamming signal having a known pattern.

From all of the above, we conclude that the combined teachings of Shridhara and Beesley would have suggested to an artisan the invention of claim 1, and are not convinced of any error on the part of the Examiner in rejecting claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley. Accordingly, the rejection of claim 1 is sustained.

We turn next to claim 2. Appellants provide no specific arguments regarding this claim, but generally argue that Shridhara and Beesley do not disclose monitoring the satellite positioning receiver. From our review of the record, we find that Shridhara discloses monitoring the satellite positioning receiver (column 4, lines 31-57). Therefore, we are in agreement with the Examiner, for the reasons set forth in the answer, that the teachings of Shridhara would have suggested to an artisan the invention set forth in claim 2.

For the lack of any specific arguments by Appellants, and our agreement with the Examiner's position, we are not persuaded of any error in the part of the examiner regarding the rejection of claim 2. Accordingly, the rejection of claim 2 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley is sustained.

We turn next to claim 3. Appellants provide no specific arguments regarding this claim, but generally argue that Shridhara and Beesley do not disclose monitoring a signal correlator of the satellite positioning system receiver. From our review of the record, we find the disclosure in Shridhara (col. 4, ll. 34-41) of detecting a sudden rise in the correlator chain output would have suggested to an artisan to monitor a signal correlator of the satellite positioning system receiver (col. 4, ll. 39-41). Therefore, we are in agreement with the Examiner, for the reasons set forth in the Answer, that the teachings of Shridhara would have suggested to an artisan the invention set forth in claim 3.

For the lack of any specific arguments by Appellants, and our agreement with the Examiner's position, we are not persuaded of any error in the part of the Examiner regarding the rejection of claim 3. Accordingly, the rejection of claim 3 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley is sustained.

We turn next to claim 4. Appellants assert (Br. 7) that Shridhara and Beesley do not disclose "disabling a PN code generator of the satellite positioning system receiver upon detecting the presence of the jamming signal." Appellants argue (*id.*) that Shridhara turns off the receiver during jamming and Beesley does not disclose a PN code generator. We sustain the rejection of claim 4 for the reasons we sustained the rejection of claim 1 under 35 U.S.C. § 103(a) as being

unpatentable over Shridhara in view of Beesley, and additionally because Shridhara discloses a PN code generator (Fig. 3) that becomes disabled when the GPS reception is disabled.

We turn next to claim 5. We are not persuaded by Appellants' assertion (Br. 8) that Shridhara and Beesley do not disclose periodically monitoring a coherent correlator output. We sustain the rejection of claim 5 for the reasons we sustained the rejection of claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley, and additionally because the disclosure in Shridhara (col. 4, ll. 34-36) of detecting a sudden rise in the correlator chain output would have suggested to an artisan to periodically monitor a coherent correlator output.

We turn next to claim 6. We are not persuaded by Appellants' assertion (Br. 8) that Shridhara and Beesley do not disclose:

blanking the satellite positioning system receiver with the blanking signal includes at least one of disregarding an output of a signal correlator of the satellite positioning system receiver during blanking periods, applying zero input to the signal correlator of the satellite positioning system receiver during blanking periods, and suspending operation of the signal correlator operation of the satellite positioning system receiver during blanking periods.

In Shridhara, we find that because the signal correlator (311) is integrated in the GPS receiver (col. 6, ll. 13-17 and Fig. 3), the operation of the signal correlator becomes suspended when the jamming signal is detected and the GPS reception is subsequently disabled. From our review of the record, we agree with the Examiner that the teachings of Shridhara would have suggested to an artisan the invention set forth in claim 6, and are not convinced of any error on the part of the Examiner in rejecting claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley. Accordingly, the rejection of claim 6 is sustained.

Appeal Number: 2006-1385
Application Number: 10/452,753

We turn next to claim 7. Appellants assert (Br. 9) that Shridhara and Beesley do not teach maintaining satellite positioning system receiver signal gain during blanking. We agree. From our review of Shridhara and Beesley, we find no suggestion for maintaining satellite positioning system receiver signal gain during blanking. We conclude that the prior art fails to establish a prima facie case of obviousness of claim 7. Accordingly, we cannot sustain the rejection of claim 7 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley.

We turn next to claim 8. Appellants provide no specific arguments regarding this claim, but generally argue that Shridhara and Beesley do not disclose the claimed features. From our review of the record, we find that Shridhara discloses storing a satellite positioning system correlator output signal and detecting the presence of a jamming signal in the satellite positioning system receiver by analyzing the stored information (col. 4, ll. 39-43). Therefore, we are in agreement with the Examiner that the teachings of Shridhara would have suggested to an artisan the invention set forth in claim 8.

For the lack of any specific arguments by Appellants, and our agreement with the Examiner's position, we are not persuaded of any error in the part of the Examiner regarding the rejection of claim 8. Accordingly, the rejection of claim 8 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley is sustained.

We turn next to claim 9, which depends from claim 8. Appellants assert (Br. 10) that none of the references analyze a stored correlator output signal to identify a characteristic of a jamming signal and synchronize the blanking signal with the jamming signal based on the identified characteristic. We agree. From our review of Shridhara and Beesley, we find no suggestion for identifying a characteristic of

a jamming signal by analyzing the stored correlator output signal and synchronizing the blanking signal with the jamming signal based on the identified characteristic. We conclude that the prior art fails to establish a prima facie case of obviousness of claim 9. Accordingly, we cannot sustain the rejection of claim 9 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley.

We turn next to claim 10. Appellants (Br. 10-11) repeat their argument that there is no reason to combine Shridhara and Beesley. Thus, we sustain the rejection of claim 10 for the reasons we sustained the rejection of claim 1 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley.

We turn next to claim 11. Because claim 11 recites subject matter similar to the subject matter recited in claim 2, we sustain the rejection of claim 11 for the reasons we sustained the rejection of claim 2 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley.

We turn next to claim 12. Because claim 12 recites subject matter similar to the subject matter recited in claim 3, we sustain the rejection of claim 12 for the reasons we sustained the rejection of claim 3 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley.

We turn next to claim 13. Because claim 13 recites subject matter similar to the subject matter recited in claim 5, we sustain the rejection of claim 13 for the reasons we sustained the rejection of claim 5 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley.

We turn next to claim 14. Appellants (Br. 13) assert that Shridhara and Beesley do not disclose or suggest identifying a pulse rate and a pulse width of the jamming signal. Appellants argue (Br. 13-14) that “Beesley fails to consider

Appeal Number: 2006-1385
Application Number: 10/452,753

jamming signal characteristics.” We disagree. From our review of Beesley, we find that the characteristics of the jamming signal are considered when the amplitude and the rate of arrival of the jamming signal are determined. Although Beesley discloses determining a pulse rate of the jamming signal by determining the rate of arrival, we find no teaching in either Shridhara or Beesley to identify a pulse width of the jamming signal. We conclude that the prior art fails to establish a prima facie case of obviousness of claim 14. Accordingly, we cannot sustain the rejection of claim 14 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley.

We turn next to claim 15. We are not persuaded by Appellants’ assertion (Br. 14) that Shridhara and Beesley do not disclose “creating the blanking signal based upon the characteristic of the jamming signal.” From our review of the record, we find that Shridhara creates a blanking signal based on the amplitude and rate of arrival of the jamming signal (p. 2, ll. 36-38 and p. 3, ll. 104-107). Therefore, we are in agreement with the Examiner that the teachings of Shridhara would have suggested to an artisan the invention set forth in claim 15.

We conclude that the combined teachings of Shridhara and Beesley would have suggested to an artisan the invention of claim 15, and are not convinced of any error on the part of the Examiner in rejecting claim 15 under 35 U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley. Accordingly, the rejection of claim 15 is sustained.

We turn next to claim 16. Because claim 16 recites subject matter analogous to the subject matter recited in claim 6, we sustain the rejection of claim 16 for the reasons we sustained the rejection of claim 6 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley.

We turn next to claim 17. Because claim 17 recites subject matter analogous to the subject matter recited in claim 7, we cannot sustain the rejection of claim 17 for the reasons we could not sustain the rejection of claim 7 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley.

We turn next to claim 18. Because claim 18 recites subject matter analogous to the subject matter recited in claim 8, we sustain the rejection of claim 18 for the reasons we sustained the rejection of claim 8 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley.

We turn next to claim 19. Appellants provide no specific arguments regarding this claim, but generally argue that Shridhara and Beesley do not disclose the claimed features. From our review of the record, we find that Shridhara discloses storing a correlator output signal and identifying a characteristic of the jamming signal by analyzing the stored signal (col. 4, ll. 39-43 and Fig. 9). Therefore, we are in agreement with the Examiner that the teachings of Shridhara would have suggested to an artisan the invention set forth in claim 19.

For the lack of any specific arguments by Appellants, and our agreement with the Examiner's position, we are not persuaded of any error in the part of the Examiner regarding the rejection of claim 19. Accordingly, the rejection of claim 19 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley is sustained.

We turn next to claim 23. Appellants provide no specific arguments regarding this claim, but generally argue (Br. 18) that Shridhara and Beesley do not disclose or suggest determining a timing of a second jamming signal and synchronizing a second blanking signal with the second jamming signal based upon the timing of the second jamming signal. In response, the Examiner asserts (Answer 8) that

Appeal Number: 2006-1385
Application Number: 10/452,753

Shridhara is not limited to one-time use of the jamming detection and jamming countermeasure operations, but rather allow subsequent use of the two operations.

From our review of Shridhara, both of which provide receivers that are designed to continuously detect in-coming jamming signals, we find that the teachings of Shridhara would have suggested to an artisan to perform jamming detection and apply countermeasures for a subsequent second jamming signal. When detecting the second jamming signal, Beesley's teaching of determining the rate of arrival of the jamming signal and adjusting the blanking signal based on the rate of arrival would have further suggested determining the timing of the second jamming signal and synchronizing the second blanking signal with the second jamming signal based upon the timing.

For the lack of any specific arguments by Appellants, and our agreement with the Examiner's position, we are not persuaded of any error in the part of the examiner regarding the rejection of claim 23. Accordingly, the rejection of claim 23 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley is sustained.

We turn next to claim 24. Appellants assert (Br. 19) that none of the references teach determining the relative timing of the jamming signals. Although Beesley teaches determining the timing of jamming signals, we find no suggestion for determining the relative timing of the jamming signals. We conclude that the prior art fails to establish a prima facie case of obviousness of claim 24. Accordingly, we cannot sustain the rejection of claim 24 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley.

We turn next to claim 25. Again, Appellants provide no specific arguments regarding this claim, but generally argue (B. 20) that Shridhara and Beesley do not

teach synchronizing the blanking signal with the jamming signal by generating a blanking signal with a blanking characteristic that at least partially overlaps the jamming characteristic of the jamming signal. We disagree. Beesley discloses a blanking signal that is generated by “stretching” the detected jamming signal (p. 1, ll. 69-72). In particular, Beesley explains that the detected noise pulse of the jamming signal is stretched in duration and output as the blanking signal, thereby generating a blanking signal having a pulse width wider than the pulse width of the jamming signal (p. 3, ll. 48-55). The blanking signal that results from this process is applied as a control signal for the blanking circuit (p. 2, ll. 1-5). The blanking circuit functions as an attenuator and reduces the jamming signal by attenuating the received signal in accordance with the blanking signal (*id.*).

From our review of Beesley, we find that in order to reduce any portion of the jamming signal, the blanking signal must be synchronized with the jamming signal so that it at least partially overlaps the jamming signal. Otherwise, the blanking circuit would not have any effect on the jamming signal. For instance, instead of attenuating the jamming signal, the blanking circuit would attenuate only those portions of the received signal that do not include the jamming signal. This is clearly inconsistent with the purpose of the blanking circuit, which is to reduce the jamming signal. From the disclosures of Shridhara and Beesley, and in particular, from Beesley’s disclosure of generating the blanking signal by stretching the jamming signal, an artisan would have been taught to synchronize the blanking signal with the jamming signal by generating a blanking signal with a blanking characteristic that at least partially overlaps the jamming characteristic of the jamming signal.

Appeal Number: 2006-1385
Application Number: 10/452,753

For the lack of any specific arguments by Appellants, and our agreement with the Examiner's position, we are not persuaded of any error in the part of the examiner regarding the rejection of claim 25. Accordingly, the rejection of claim 25 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley is sustained.

We turn next to claim 26. Appellants assert (Br. 19) that none of the references teach determining the pulse rate of the jamming signal. Contrary to Appellants' assertion, Beesley's disclosure of determining the rate of arrival of the jamming signal would have suggested to an artisan to determine the pulse rate of the jamming signals. Nonetheless, we find no suggestion in Beesley for generating a blanking signal having substantially the same pulse width and pulse rate characteristic as the jamming signal. We conclude that the prior art fails to establish a prima facie case of obviousness of claim 26. Accordingly, we cannot sustain the rejection of claim 26 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley.

Next, we turn to the rejection of claims 1-19 and 23-26 under 35 U.S.C. § 103(a) as being unpatentable over Shridhara in view of Fielder. Regarding claim 1, the Examiner's position (Answer 3-5) is that Shridhara does not disclose that the jamming signal has a known pattern and that a blanking signal has a pattern similar to the jamming signal and synchronized with the jamming signal. To overcome this deficiency of Shridhara, the Examiner turns to Fielder for a teaching of a jamming signal having a known pattern and reducing the jamming signal with a blanking signal having a pattern similar to and synchronized with the jamming signal (*id.*).

Appellants assert (Br. 6), *inter alia*, that neither Shridhara nor Fielder disclose a blanking signal having a pattern similar to the jamming signal and synchronized with the jamming signal.

From our review of Fielder, the reference is directed to a GPS receiver with improved immunity to burst transmissions (col. 1, ll. 1-2). Fielder discloses reducing a jamming signal by substituting the bit-stream of the received signal with a locally generated bit pattern in response to the presence of an overload signal (col. 2, ll. 40-42). The locally generated bit pattern is set so that the average value accumulated in the correlator tends towards zero (col. 5, ll. 37-42). While the locally generated bit pattern in Fielder can be considered a blanking signal due to the zeroing effect it has on the correlator, we find no suggestion that the locally generated bit pattern is similar to the jamming signal. We conclude that the prior art fails to establish a prima facie case of obviousness of claim 1. Accordingly, we cannot sustain the rejection of claim 1 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Fielder.

We turn next to claims 2-9. We reverse the rejection of claims 2-9 due to their dependency from claim 1, and the deficiencies of Fielder.

We turn next to claim 10. Appellants assert (Br. 11) that Shridhara in combination with Fielder fail to teach synchronizing a blanking signal with a jamming signal based upon a characteristic of the jamming signal. We agree. From our review of Fielder, we find no suggestion for synchronizing the blanking signal with a jamming signal based upon a characteristic of the jamming signal. We conclude that the prior art fails to establish a prima facie case of obviousness of claim 10. Accordingly, we cannot sustain the rejection of claim 10 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Fielder.

Appeal Number: 2006-1385
Application Number: 10/452,753

We turn next to claims 11-19. We reverse the rejection of claims 11-19 due to their dependency from claim 10, and the deficiencies of Fielder.

We turn next to claim 23. Appellants assert (Br. 18) that Shridhara in combination with Fielder do not teach determining a timing of a second jamming signal and synchronizing a second blanking signal with the second jamming signal based upon the timing of the second jamming signal. We agree. From our review of Fielder, we find no suggestion of synchronizing a second blanking signal with a second jamming signal based upon the determined timing of the second jamming signal. We conclude that the prior art fails to establish a prima facie case of obviousness of claim 23. Accordingly, we cannot sustain the rejection of claim 23 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Fielder.

We turn next to claim 24. We reverse the rejection of claim 24 due to its dependency from claim 23, and the deficiencies of Fielder.

We turn next to claim 25. Appellants assert (Br. 20) that Shridhara in combination with Fielder do not teach synchronizing the blanking signal with the jamming signal so that the blanking characteristic of the blanking signal at least partially overlaps the jamming characteristic. We agree. In Fielder, the locally generated bit stream is set so that the average value accumulated in the correlator tends towards zero. In particular, the locally generated bit stream is characterized as an alternating series of +1 and -1 values and is unrelated to the characteristic of the jamming signal. From our review of Fielder, we find no suggestion for synchronizing the blanking signal with the jamming signal so that the blanking characteristic of the blanking signal at least partially overlaps the jamming characteristic. We conclude that the prior art fails to establish a prima facie case of

Appeal Number: 2006-1385
Application Number: 10/452,753

obviousness of claim 25. Accordingly, we cannot sustain the rejection of claim 25 under U.S.C. § 103(a) as being unpatentable over Shridhara in view of Fielder.

We turn next to claim 26. We reverse the rejection of claim 26 due to its dependency from claim 25, and the deficiencies of Fielder.

CONCLUSION

- The decision of the examiner to reject claims 1-6, 8, 10-13, 15-16, 18-19 and 23, 25 under 35 U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley is affirmed. The rejection of claims 7, 9, 14, 17, 24, 26 under 35 U.S.C. § 103(a) as being unpatentable over Shridhara in view of Beesley is reversed.
- The rejection of claims 1-19 and 23-26 under 35 U.S.C. § 103(a) as being unpatentable over Shridhara in view of Fielder is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

STUART S. LEVY)	
Administrative Patent Judge)	
)	
)	
)	
)	BOARD OF PATENT
ROBERT E. NAPPI)	APPEALS
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)	INTERFERENCES
)	
)	
LINDA E. HORNER)	
Administrative Patent Judge)	

Appeal Number: 2006-1385
Application Number: 10/452,753

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