

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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN G. BEAUREGARD, and
DAVID B. LEVIN

Appeal 2006-2252
Application 10/397,012
Technology Center 3600

Decided: May 14, 2007

Before MURRIEL E. CRAWFORD, LINDA E. HORNER, and ANTON W. FETTING, *Administrative Patent Judges*.

CRAWFORD, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

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This appeal involves claims 1 to 31, the only claims pending in this application. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b) (2002).

The claims are directed to an apparatus for continually monitoring a plurality of Global Positioning System satellites in space. Claim 1 is illustrative:

1. An apparatus for continuously monitoring a plurality of Global Positioning System (GPS) satellites in space, comprising:
a plurality of GPS receivers respectively on-board said plurality of GPS satellites for continuously monitoring and receiving navigation signals from said plurality of GPS satellites in view of the plurality of GPS receivers; and

means for determining a range to said each GPS satellite in view of said plurality of GPS receivers using the navigation signals.

The Examiner relies on the following prior art references to show unpatentability:

Brodie	US 6,009,376	Dec. 28, 1999
Green	US 6,667,713 B2	Dec. 23, 2003
Murphy	US 6,674,398 B2	Jan. 06, 2004

The rejections as presented by the Examiner are as follows:

1. Claims 1 to 31 are rejected under 35 U.S.C. § 102(b) as being anticipated by Brodie
2. Claims 1 to 3, 6, 7, 10, 14 to 16, 18, 19, 21 to 23, 25 and 26 are rejected under 35 U.S.C. § 102(e) as being anticipated by Murphy.
3. Claims 5, 9, 20 and 27 are rejected under 35 U.S.C. § 103(a) as unpatentable over Murphy in view of Green.
4. Claims 4, 8, 11 to 13, 17, 24 and 28 to 31 are rejected under 35 U.S.C. § 103(a) as unpatentable over Brodie.
5. Claims 4, 8, 11 to 13, 17, 24 and 28 to 31 are rejected under 35 U.S.C. § 103(a) as unpatentable over Green in view of Brodie.¹

The Appellants contend that neither Brodie nor Murphy discloses a Global Positioning System (“GPS”) and that Brodie does not disclose a GPS having a receiver that receives its own navigation signal such that said signal can be canceled by using the GPS receiver’s signal processor.

¹ The examiner has withdrawn the rejection of claims 1 to 3, 5 to 7, 9, 10, 14 to 16, 18, 19, 21 to 23, 25 and 26, under 35 U.S.C. § 102(b) as anticipated by Green (Answer 10).

ISSUES

The first issue is whether the Appellants have shown that the Examiner erred in finding that Brodie and Murphy discloses a GPS.

The second issue is whether the Appellants have shown that the Examiner erred in finding that Brodie discloses a GPS having a receiver which receives its own navigation signal such that the navigational signal can be cancelled by using the GPS receiver's signal processor.

FINDINGS OF FACT

The Appellants invented an apparatus for continuously monitoring a plurality of GPS satellites from space rather than from the ground (Specification page 2). The apparatus includes a plurality of GPS receivers on the plurality of GPS satellites (Specification p. 2). The appealed claims do not recite whether the GPS satellites receive and transmit L-band signals or UHF signals. Each satellite receiver continuously monitors and receives navigation signals from the plurality of GPS satellites (Specification p. 2). The Appellants' invention eliminates the need for all ground monitor stations outside the continental United States (Specification p. 2).

Each GPS receiver receives navigation signals from its own satellite and all other GPS satellites in view. The host satellite signal is then cancelled (Specification p. 2 to 3). The system also includes a Kalman filter

on one or more GPS satellites. The Kalman filter calculates the ephemeris data and clock error data (Specification p. 7).

Brodie discloses an apparatus for continuously monitoring a plurality of satellites from space (col. 1, ll. 11 to 16). The apparatus includes a plurality of GPS receivers on the plurality of GPS satellites (col. 4, ll. 30 to 46). A broadcast period is defined and each satellite broadcasts during the assigned portion of that period. The GPS receivers continuously monitor and receive navigation signals from the plurality of GPS satellites and identify the broadcasting satellite by noting the time of broadcast (col. 4, ll. 40 to 42). The system also includes a Kalman filter on each GPS satellite. The Kalman filter calculates the ephemeris data and clock error data (col 4, ll. 22 to 29). Brodie does not disclose that the GPS receivers receive their own navigation signals such that the navigation signal can be cancelled by using the GPS receiver's signal processor.

The GPS satellites disclosed in Brodie are a new generation of GPS satellites referred to as GPS block IIR satellites which employ a special transponder unit which is designed to transmit ultra-high frequency (UHF) signals between GPS satellites (col. 2, l. 62 to col. 3, l. 5). While the GPS satellites in Brodie transmit and receive UHF signals the satellites are nonetheless GPS satellites.

Murphy discloses a global communication, navigation, and surveillance system (GCNS) (col. 3, ll. 3 to 9). The system includes satellites that broadcast multiple navigation signals and can engage in two way communications (col. 3, ll. 12 to 13). Murphy does not disclose a GPS satellite system.

Green discloses a GPS system that includes a self-monitoring capability in which each satellite can check the reliability of its own signal (col. 5, ll. 29 to 55). A plurality of tests are performed on the satellite signal and the position, velocity and time information contained therein to determine if the signal is reliable (col. 3, ll. 55 to 58). If the signal is unreliable, a warning signal is sent as part of the next update of the satellite signal so that users can reject the satellite signal (col. 3, ll. 59 to 62). Green does not disclose that each receiver receives its own navigation signal and cancels its signal using the GPS receiver's signal processor.

ANALYSIS/CONCLUSION

As we find that Brodie discloses each and every element of claim 1, and a GPS in particular, we will sustain the rejection as it is directed to claim 1. We will also sustain this rejection as it is directed to claims 14 and 28 because even though Appellants contend that Brodie does not disclose that

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the GPS receivers are L-band receivers, neither claim 14 nor claim 28 recite L-band receivers. We will also sustain the rejection as it is directed to claims 2 to 4, 6 to 8, 10, 11, 14 to 19, 21 to 26, and 28 to 31 because the Appellants have not argued the separate patentability of these claims with any specificity. 37 C.F.R. 41.37(c)(vii).

We will not sustain this rejection as it is directed to claims 5, 9, 12, 13, 20, and 27 because Brodie does not disclose that the satellite's own navigation signal can be cancelled by the GPS receiver's signal processor.

We will not sustain the Examiner's rejection of claims 1 to 3, 6, 7, 10, 14 to 16, 18, 19, 21 to 23, 25, and 26 under 35 U.S.C. § 102(e) as being anticipated by Murphy because Murphy does not disclose a GPS system. We will not sustain the Examiner's rejection of claims 5, 9, 20, and 27 under 25 U.S.C. § 103 as being unpatentable over Murphy in view of Green for the same reason.

We will sustain the Examiner's rejection of claims 4, 8, 11 to 13, 17, 24, and 28 to 31 under 35 U.S.C. § 103 as being unpatentable over the combined teachings of Murphy and Brodie and the rejection of claims 4, 8, 11 to 13, 17, 24, and 28 to 31 under 35 U.S.C. § 103 as being unpatentable over the combined teachings of Green and Brodie because it is our view that

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Brodie alone teaches the subject matter of these claims. Therefore, the disclosures of Green and Murphy are superfluous.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv)(2006).

AFFIRMED-IN-PART

jlb

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