UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,830	08/28/2006	Arnold Kravitz	20040055	1370

22500 7590 12/21/2012

BAE SYSTEMS
PO BOX 868
NHQ1-719
NASHUA, NH 03061-0868

EXAMINER	
JOHNSON, STEPHEN	

ART UNIT	PAPER NUMBER
3641	

MAIL DATE	DELIVERY MODE
12/21/2012	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ARNOLD KRAVITZ

Appeal 2010-008591
Application 10/590,830
Technology Center 3600

Before NEAL E. ABRAMS, CHARLES N. GREENHUT, and REMY J. VANOPHEM, *Administrative Patent Judges*.

ABRAMS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Arnold Kravitz (Appellant) seeks our review under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1-4, 7, 10-14, 17, 19 and 20.[1] We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

---

[1] See Ans. 2.

THE INVENTION

The claimed invention is directed to a system and method for countering an airborne threat to an aircraft.

Independent claims 1 and 17, reproduced below, are illustrative of the subject matter on appeal.

1. A system for countering an airborne threat to an aircraft, comprising:

at least one aircraft having an airborne countermeasures system (ACS) capable of controlling deployment of countermeasures located on said aircraft; and

a central countermeasures management system (CCMS) capable of communicating with said ACS to control said ACS in deployment of said countermeasures located on said aircraft.

17. A method of countering an airborne threat to an aircraft, comprising the steps of:

determining threat information about said airborne threat;

transmitting said threat information to a remote device;

transmitting source information to said remote device;

receiving instructions to deploy a countermeasure selected by said remote device, as a result of said steps of determining threat information, transmitting said threat information, and transmitting said source information, wherein said selected countermeasure is presently available; and

deploying said selected countermeasure,

wherein said threat information and said source information is collectively referred to as a track file.

THE PRIOR ART

The Examiner relied upon the following as evidence of unpatentability:

Barnes	US 5,992,288	Nov. 30, 1999
Malakatas	US 6,467,388 B1	Oct. 22, 2002
Steadman	US 6,980,152 B2	Dec. 27, 2005

THE REJECTIONS

Claim 1 stands rejected under 35 U.S.C. § 102(e) as being anticipated by Steadman.

Claims 17, 19 and 20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Barnes.

Claims 2-4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Steadman in view of Barnes.

Claims 7 and 10-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Barnes in view of Malakatas

OPINION

Claim 1– Anticipation
Steadman

The system recited in claim 1 comprises at least one aircraft having an airborne countermeasures system (ACS) capable of controlling deployment of those countermeasures, and a central countermeasures control system to control the ACS in deployment of the countermeasures. Appellant argues in response to the positions taken by the Examiner in this rejection (Ans. 3-4 and 6) that "nothing in Steadman indicates the processor 116 has specific knowledge of the countermeasure 141 located on the aircraft, but instead simply signals the ACS (141 in Steadman) that a threat has been recognized and identifies the recognized threat," and fails to disclose an aircraft "having an onboard countermeasure system that can control deployment of countermeasures" and "a central management system that can control the onboard system." Reply Br. 4-5.

Steadman discloses a surveillance system 110 that is deployed on the ground (Col. 3, ll. 7-9; Fig. 1) and a countermeasure system 141 deployed on an aircraft 140 (Col. 3, ll. 20-21; Fig. 1). The system includes a transmitter 112 that sends a cue signal 120 to a receiver 142a located on the aircraft, in response to which the countermeasures 146, "which may be located strategically at multiple locations around the fuselage of the aircraft 140," are deployed. Col. 3, ll. 32-42. Surveillance system 140 comprises sensors 114a-c that monitor a selected area to detect threats (Col. 3. ll. 56-58; Col. 4, ll. 31-34) and a signal processer 116 which detects the presence of these threats (Col. 4, ll. 46-48). Steadman explains that if the signature of a surface-to-air missile is found, a threat-decision logic block 318 may cause a trigger or cue signal 320 to be sent to one or more countermeasure systems "that are onboard nearby aircraft," which "may deploy countermeasures . . . in response to receiving the cue signal 320." Col. 7, ll. 7-14. Fig. 4 shows a flow chart for a method 400 "of deploying an aircraft-based countermeasure" when a threat is detected, whereupon "a cue signal is communicated 406 to an aircraft-based countermeasure system," which then "deploys 408 one or more countermeasures." Col. 8, ll. 25-38.

Using the language of claim 1 as a guide, Steadman discloses at least one aircraft (140) having an airborne countermeasures system (141) which is capable of controlling (deploying) countermeasures (146) located on the aircraft (in response to a cue signal 320 received by a receiver 142a located on the aircraft), and a central countermeasures management system (a signal processer 116 and a threat-decision logic block 318) capable of communicating with the aircraft (through a transmitter 112 and receiver

142a) to control the airborne countermeasures system in deployment of the countermeasures located on the aircraft.

This being the case, while we have carefully considered the arguments presented by Appellant, they have not convinced us that the decision of the Examiner is in error, and the rejection of claim 1 is affirmed.

Claims 17, 19 and 20 – Anticipation
Barnes

Claim 17 is directed to a method of countering an airborne threat to an aircraft. The method includes the steps of determining information about an airborne threat, transmitting the threat information to "a remote device," transmitting source information (such as roll, horizontal, elevation, azimuth and time) "to said remote device," receiving instructions to deploy countermeasures "selected by said remote device" as a result of the information it received, and deploying selected countermeasures. In response to the Appellant's assertion that Barnes fails to disclose the remote device required by the claim (Supp. Br. 7; Reply Br. 5-6), the Examiner first takes the position that the databases, calculations and algorithms disclosed by Barnes (the TIC)[2] are functions that are accomplished by devices (Ans.7) which "must inherently be located somewhere" (Ans. 8). The Examiner then goes on to conclude, referring to Fig. 2 of Barnes, which shows four defensive zones (Col. 3, ll. 4-5), that "[i]f the TIC++[3] is located outside of zones 1-4; it is located remotely," and "[i]f the TIC ++ is located in one of zones 1-4; it must be considered to be located remotely relative to the other zones." Thus, concludes the Examiner, "the TIC++ inherently meets the claim limitation directed to a 'remote device' as claimed." Ans. 8.

[2] Trial Intercept Calculation.
[3] TIC+ The Target Priority Database + The Target/Weapon Pairing Knowledge Data base.

We find no support in Barnes for the Examiner's conclusion. Barnes discloses an automatic threat evaluation and weapons assignment system wherein a target that enters a defensive zone is assigned a priority and weapons are allocated to be employed against the target. See Abstract; Col. 3, ll. 3-55; Figs. 2 and 4. Barnes explains in great detail in Columns 3 through 6 the manner in which the system operates, including the collection, processing and evaluation of the information which results in "a weapon recommendation to the weapons controller" and, after a time delay and in the absence of operator intervention, results in an engage command automatically being transmitted to a fire unit. Col. 3, ll. 12-19. However, while it is clear that some "device" or "devices" must be present to collect, process and evaluate the information, absent from the Barnes disclosure is information regarding the location of such device or devices alone or with respect to other elements of the system. It therefore cannot be established that in the Barnes system information about an airborne threat is transmitted to "a remote device," that source information is transmitted "to said remote device," and that instructions are received to deploy a countermeasure selected by "said remote device," all as required by the method set forth in Appellant's claim 17.

The rejection of independent claim 17 is reversed, as is the like rejection of claims 19 and 20, which depend from claim 17.

Claims 2-4– Obviousness
Steadman In View Of Barnes

Claims 2-4 depend from claim 1. Appellant has chosen not to present arguments specific to the rejection of claims 2-4 as being obvious in view of Steadman and Barnes, but merely alleges that Steadman fails to disclose

every element of claim 1, Barnes fails to overcome the shortcomings of Steadman, and "[t]hus, claims 2-4 are allowable over Steadman in view of Barnes." Supp. Br. 10. The rejection of claim 1 as being anticipated by Steadman has been affirmed, supra, and in view of the position expressed by Appellant with regard to the rejection of claims 2-4, this rejection also is affirmed.

Claims 7 And 10-14 – Obviousness
Barnes In View Of Malakatas

Independent claim 7 sets forth a method including the steps of receiving threat information from "a remote source," receiving source information "about said remote source," selecting a countermeasure that is presently available "by said remote source," and instructing "said remote source" to deploy the selected countermeasure. The Examiner has relied upon Barnes for teaching all of the requirements recited in the claim, except "undisclosed is receiving the threat information from the remote source or remote firing unit," however, "Malakatas (388) teaches receiving the threat information from the remote source or remote firing unit (col. 4, lines 40-54)." Ans. 5. The Examiner's conclusion is that it therefore would have been obvious to one of ordinary skill in the art to apply the teachings of Malakatas to the Barnes system, resulting in a "method whose method for receiving information is via a sensor located on the remote source or firing unit." Ans. 5. Appellant previously had argued that this is not the case, on the basis that Barnes does not disclose that the threat information and the countermeasure originate from the same source, and that neither Barnes nor Malakatas disclose "instructing said remote source to deploy said selected

countermeasure that is presently available." Supp. Br. 13. Appellant further argues on page 6 of the Reply Brief that neither Barnes nor Malakatas teach "receiving source information about said remote source."

The Examiner has admitted that Barnes fails to teach the first two steps of claim 7, which are "receiving threat information . . . from a remote source," and "receiving source information from said remote source." Ans. 5. Malakatas discloses a system comprising a plurality of linked firing units, each with its own fire control system. Col. 6, ll. 21-24. However, Malakatas explains that "the firing units are autonomous in monitoring the firing units, and also in the assessment of the threat and selection of the aerial target to be engaged by them" (Col. 7, ll. 53-56), and there is no mention in Malakatas of a remote source being present in the disclosed system, much less a single remote source from which threat information and source information are received, which selects an available countermeasure, and to which instructions are sent to deploy the selected countermeasure, all as required by the method recited in claim 7.

The rejection of independent claim 7 therefore is reversed, as is the like rejection of claims 10-14, which depend from claim 7.

DECISION

The rejection of claim 1 as being anticipated by Steadman is affirmed.

The rejection of claims 17, 19 and 20 as being anticipated by Barnes is reversed.

The rejection of claims 2-4 as being unpatentable over Steadman in view of Barnes is affirmed.

The rejection of claims 7 and 10-14 as being unpatentable over Barnes in view of Malakatas is reversed.

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

AFFIRMED-IN-PART

JRG