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11/736,356	04/17/2007	Jed Margolin		3649

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JED MARGOLIN  
1981 EMPIRE ROAD  
RENO, NV 89521-7430

EXAMINER
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MANCHO, RONNIE M

ART UNIT	PAPER NUMBER
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3664

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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.

**Office Action Summary**

<b>Application No.</b> 11/736,356	<b>Applicant(s)</b> MARGOLIN, JED	
<b>Examiner</b> RONNIE MANCHO	<b>Art Unit</b> 3664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1)  Responsive to communication(s) filed on 11/29/10.
- 2a)  This action is **FINAL**.
- 2b)  This action is non-final.
- 3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4)  Claim(s) 1-14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5)  Claim(s) \_\_\_\_\_ is/are allowed.
- 6)  Claim(s) 1-14 is/are rejected.
- 7)  Claim(s) \_\_\_\_\_ is/are objected to.
- 8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9)  The specification is objected to by the Examiner.
- 10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1)  Notice of References Cited (PTO-892)
- 2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5)  Notice of Informal Patent Application
- 6)  Other: \_\_\_\_\_.

## DETAILED ACTION

### Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Margolin (5904724) in view of Duggan et al (US 2005004723).

Regarding claim 1, Margolin (abstract; figs. 1-7; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67) discloses a system for safely flying an unmanned aerial vehicle in civilian airspace comprising:

(a) a ground station 400 (fig. 1&4) equipped with a synthetic vision system (figs. 1&3; col. 5, lines 50-60; col. 4, lines 1 to col. 5, lines 67);

(b) an unmanned aerial vehicle 300 (figs. 1&3) capable of supporting said synthetic vision system (305, 306, 307, 311 on aircraft; col. 5, lines 50-60; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67);

(c) a remote pilot 102 operating said ground station 400 (figs. 1&4; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67);

(d) a communications link between said unmanned aerial vehicle 300 and said ground station 400;

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e) a system onboard said unmanned aerial vehicle 300 for detecting the presence and position of nearby aircraft (305, 306, 307, 311 on aircraft) and communicating this information to said remote pilot 102 (col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67);

whereas said remote pilot uses said synthetic vision system (305, 306, 307, 311 on aircraft; col. 5, lines 50-60) to control said unmanned aerial vehicle 300 during at least selected phases of the flight of said unmanned aerial vehicle (selected phases implies some or all phases during flight).

Margolin did not disclose that the vehicle is flown using an autonomous control system (e.g. autopilot). However, Duggan teach of a system for safely flying an unmanned aerial vehicle in civilian airspace comprising:

a ground station controlling an unmanned aerial vehicle (sec. 0352, 00353), wherein during phases of a flight of an unmanned aerial vehicle (UAV, sec 0318, 0322, 0353) when a synthetic vision (sec. 0356, 0365, 0388, 0390) is not used to control said unmanned aerial vehicle said unmanned aerial vehicle is flown using an autonomous control system (autopilot, sec 0346 to 0350, 0390-0329).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Margolin as taught by Duggan for the purpose of incorporating an autopilot to ensure smooth transitions (Duggan abstract, sec 0014, 0085, 0086).

The different embodiments in both prior arts are combinable as it would be obvious to one having ordinary skill in the art.

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Regarding claim 2, Margolin (abstract; figs. 1-7; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67) in view of Duggan disclose the system of claim 1 whereby said selected phases of the flight of said unmanned aerial vehicle comprise:

(a) when said unmanned aerial vehicle is within a selected range of an airport or other designated location and is below a first specified altitude;

(b) when said unmanned aerial vehicle is outside said selected range of an airport or other designated location and is below a second specified altitude.

Regarding claim 3, Margolin (abstract; figs. 1-7; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67) in view of Duggan disclose the system of claim 1 further comprising a system onboard said unmanned aerial vehicle for periodically transmitting the identification, location, altitude, and bearing of said unmanned aerial vehicle.

Regarding claim 4, Margolin (abstract; figs. 1-7; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67) in view of Duggan disclose the system of claim 1 further comprising a system onboard said unmanned aerial vehicle for providing a communications channel for Air Traffic Control and the pilots of other aircraft to communicate directly with said remote pilot.

Regarding claim 5, Margolin (abstract; figs. 1-7; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67) in view of Duggan disclose a system for safely flying an unmanned aerial vehicle in civilian airspace comprising:

(a) a ground station equipped with a synthetic vision system;

(b) an unmanned aerial vehicle capable of supporting said synthetic vision system;

(c) a remote pilot operating said ground station;

(d) a communications link between said unmanned aerial vehicle and said ground station;

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e) a system onboard said unmanned aerial vehicle for detecting the presence and position of nearby aircraft and communicating this information to said remote pilot;

whereas said remote pilot uses said synthetic vision system to control said unmanned aerial vehicle during at least selected phases of the flight of said unmanned aerial vehicle, and during those phases of the flight of said unmanned aerial vehicle when said synthetic vision system is not used to control said unmanned aerial vehicle said unmanned aerial vehicle is flown using an autonomous control system, and

whereas the selected phases of the flight of said unmanned aerial vehicle comprise:

(a) when said unmanned aerial vehicle is within a selected range of an airport or other designated location and is below a first specified altitude;

(b) when said unmanned aerial vehicle is outside said selected range of an airport or other designated location and is below a second specified altitude.

Margolin did not disclose that the vehicle is flown using an autonomous control system. However, Duggan teach of a system for safely flying an unmanned aerial vehicle in civilian airspace comprising:

a ground station controlling an unmanned aerial vehicle (sec. 0352, 00353), wherein during phases of a flight of an unmanned aerial vehicle (UAV, sec 0318, 0322, 0353) when a synthetic vision (sec. 0356, 0365, 0388, 0390) is not used to control said unmanned aerial vehicle said unmanned aerial vehicle is flown using an autonomous control system (autopilot, sec 0346 to 0350, 0390-0329).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Margolin as taught by Duggan for the purpose of incorporating an autopilot to ensure smooth transitions (Duggan abstract, sec 0014, 0085, 0086).

The different embodiments in both prior arts are combinable as it would be obvious to one having ordinary skill in the art.

Regarding claim 6, Margolin (abstract; figs. 1-7; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67) in view of Duggan disclose the system of claim 5 further comprising a system onboard said unmanned aerial vehicle for periodically transmitting the identification, location, altitude, and bearing of said unmanned aerial vehicle.

Regarding claim 7, Margolin (abstract; figs. 1-7; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67) in view of Duggan disclose the system of claim 5 further comprising a system onboard said unmanned aerial vehicle for providing a communications channel for Air Traffic Control and the pilots of other aircraft to communicate directly with said remote pilot.

Regarding claim 8, Margolin (abstract; figs. 1-7; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67) in view of Duggan disclose a method for safely flying an unmanned aerial vehicle as part of a unmanned aerial system equipped with a synthetic vision system in civilian airspace comprising the steps of:

(a) using a remote pilot to fly said unmanned aerial vehicle using synthetic vision during at least selected phases of the flight of said unmanned aerial vehicle, and during those phases of the flight of said unmanned aerial vehicle when said synthetic vision system is not used to control said unmanned aerial vehicle an autonomous control system is used to fly said unmanned aerial vehicle;

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(b) providing a system onboard said unmanned aerial vehicle for detecting the presence and position of nearby aircraft and communicating this information to said remote pilot.

Margolin did not disclose that the vehicle is flown using an autonomous control system. However, Duggan teach of a system for safely flying an unmanned aerial vehicle in civilian airspace comprising:

a ground station controlling an unmanned aerial vehicle (sec. 0352, 00353), wherein during phases of a flight of an unmanned aerial vehicle (UAV, sec 0318, 0322, 0353) when a synthetic vision (sec. 0356, 0365, 0388, 0390) is not used to control said unmanned aerial vehicle said unmanned aerial vehicle is flown using an autonomous control system (autopilot, sec 0346 to 0350, 0390-0329).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Margolin as taught by Duggan for the purpose of incorporating an autopilot to ensure smooth transitions (Duggan abstract, sec 0014, 0085, 0086).

The different embodiments in both prior arts are combinable as it would be obvious to one having ordinary skill in the art.

Regarding claim 9, Margolin (abstract; figs. 1-7; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67) in view of Duggan disclose the method of claim 8 whereby said selected phases of the flight of said unmanned aerial vehicle comprise:

(a) when said unmanned aerial vehicle is within a selected range of an airport or other designated location and is below a first specified altitude;

(b) when said unmanned aerial vehicle is outside said selected range of an airport or other designated location and is below a second specified altitude.



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Regarding claim 10, Margolin (abstract; figs. 1-7; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67) in view of Duggan disclose the method of claim 8 further comprising the step of providing a system onboard said unmanned aerial vehicle for periodically transmitting the identification, location, altitude, and bearing of said unmanned aerial vehicle.

Regarding claim 11, Margolin (abstract; figs. 1-7; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67) in view of Duggan disclose the method of claim 8 further comprising the step of providing a system onboard said unmanned aerial vehicle for providing a communications channel for Air Traffic Control and the pilots of other aircraft to communicate directly with said remote pilot.

Regarding claim 12, Margolin (abstract; figs. 1-7; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67) in view of Duggan disclose a method for safely flying an unmanned aerial vehicle as part of a unmanned aerial system equipped with a synthetic vision system in civilian airspace comprising the steps of:

(a) using a remote pilot to fly said unmanned aerial vehicle using synthetic vision during at least selected phases of the flight of said unmanned aerial vehicle, and during those phases of the flight of said unmanned aerial vehicle when said synthetic vision system is not used to control said unmanned aerial vehicle an autonomous control system is used to fly said unmanned aerial vehicle;

(b) providing a system onboard said unmanned aerial vehicle for detecting the presence and position of nearby aircraft and communicating this information to said remote pilot;

whereas said selected phases of the flight of said unmanned aerial vehicle comprise:

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(a) when said unmanned aerial vehicle is within a selected range of an airport or other designated location and is below a first specified altitude;

(b) when said unmanned aerial vehicle is outside said selected range of an airport or other designated location and is below a second specified altitude.

Margolin did not disclose that the vehicle is flown using an autonomous control system. However, Duggan teach of a system for safely flying an unmanned aerial vehicle in civilian airspace comprising:

a ground station controlling an unmanned aerial vehicle (sec. 0352, 00353), wherein during phases of a flight of an unmanned aerial vehicle (UAV, sec 0318, 0322, 0353) when a synthetic vision (sec. 0356, 0365, 0388, 0390) is not used to control said unmanned aerial vehicle said unmanned aerial vehicle is flown using an autonomous control system (autopilot, sec 0346 to 0350, 0390-0329).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Margolin as taught by Duggan for the purpose of incorporating an autopilot to ensure smooth transitions (Duggna abstract, sec 0014, 0085, 0086).

The different embodiments in both prior arts are combinable as it would be obvious to ne having ordinary skill in the art.

Regarding claim 13, Margolin (abstract; figs. 1-7; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67) in view of Duggan disclose the method of claim 12 further comprising the step of providing a system onboard said unmanned aerial vehicle for periodically transmitting the identification, location, altitude, and bearing of said unmanned aerial vehicle.

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Regarding claim 14, Margolin (abstract; figs. 1-7; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67) in view of Duggan disclose the method of claim 12 further comprising the step of providing a system onboard said unmanned aerial vehicle for providing a communications channel for Air Traffic Control and the pilots of other aircraft to communicate directly with said remote pilot.

### **Response to Arguments**

3. Applicant's arguments filed 11/29/10 have been fully considered but they are not persuasive.

Applicant's specification is ONLY 16 pages long. However, applicant has provided an affidavit and remarks that are over 200 pages. The affidavits are referring to paying rents and mortgages, etc. The examiner does not understand how paying rents and mortgages are related to the present invention drawn to flying an un-manned aerial vehicle.

Applicant further argues that Margolin belongs to the inventor. It is noted that the prior art is a statutory bar since it was published more than 8 years before filing of the present application.

Applicant further argues that the prior art do not disclose flying an unmanned aerial vehicle (i.e. an aircraft) in civilian airspace. The examiner does not acquiesce to applicant's remarks. The prior art clearly shows flying an unmanned aerial vehicle (i.e. an aircraft) in civilian airspace since the air space in which the vehicle is flown is not restricted. As further noted applicant fails to provide a particular meaning attached to "civilian airspace".

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Applicant further argues that both prior art do not disclose “a synthetic vision system”. The examiner disagrees. It appears that applicant is insisting that the prior art must recite the exact same terms as disclosed in the claims. Applicant first of all does not present an argument which first provide the meaning of the claimed “synthetic vision system”. As disclosed in applicant's specification the claimed, “a synthetic vision system” is referring to 3-D vision. The prior art disclose 3-D presentation of image to a pilot (here a remote pilot) thus the prior art anticipates the claimed, “a synthetic vision system”.

Applicant further argues about the abstract cited in the prior. The purpose of the argument is not understood since applicant is arguing that the popular interpretation of 608.01 (b) is that the purpose of the abstract is to provide search terms. It is unclear whether “popular” refers to the manner abstracts are interpreted in Florida, Washington, or somewhere else. Abstracts are not excluded during the examination process.

Some of applicant’s remarks are that the prior art does not recite the phrase, “safely flying an unmanned aerial vehicle in civilian airspace comprising: ...”. Applicant thus insists that the rejection is conclusory and is not supported. The examiner disagrees and notes that any particular level of safety is not described or disclosed in the specification nor is there any meaning provided for “ civilian airspace” or “safety”. It is believed that the aircraft flown in the prior art is flown safely and further that the aircraft is flown in all airspaces since a particular airspace was not prohibited.

Applicant continues that the examiner fails to address all of the recitations of the rejected claims. The examiner disagrees and notes that the prior art anticipates all limitations in the

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claims. There is not rule in MPEP that insist that the prior must recite the terms in the claims exactly as they are disclosed in the claims.

4. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Margolin (5904724) in view of Duggan et al (US 2005004723).

Margolin (abstract; figs. 1-7; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67) discloses a system for safely flying an unmanned aerial vehicle in civilian airspace comprising:

(a) a ground station 400 (fig. 1&4) equipped with a synthetic vision system (figs. 1&3; col. 5, lines 50-60; col. 4, lines 1 to col. 5, lines 67);

(b) an unmanned aerial vehicle 300 (figs. 1&3) capable of supporting said synthetic vision system (305, 306, 307, 311 on aircraft; col. 5, lines 50-60; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67);

(c) a remote pilot 102 operating said ground station 400 (figs. 1&4; col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67);

(d) a communications link between said unmanned aerial vehicle 300 and said ground station 400;

e) a system onboard said unmanned aerial vehicle 300 for detecting the presence and position of nearby aircraft (305, 306, 307, 311 on aircraft) and communicating this information to said remote pilot 102 (col. 3, lines 8-67; col. 4, lines 1-67; col. 5, lines 1-67);

whereas said remote pilot uses said synthetic vision system (305, 306, 307, 311 on aircraft) to control said unmanned aerial vehicle 300 during at least selected phases of the flight of said unmanned aerial vehicle.

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Margolin did not disclose that the vehicle is flown using an autonomous control system (e.g. an autopilot). However, Duggan teach of a system for safely flying an unmanned aerial vehicle in civilian airspace comprising:

a ground station controlling an unmanned aerial vehicle (sec. 0352, 00353), wherein during phases of a flight of an unmanned aerial vehicle (UAV, sec 0318, 0322, 0353) when a synthetic vision (sec. 0356, 0365, 0388, 0390) is not used to control said unmanned aerial vehicle said unmanned aerial vehicle is flown using an autonomous control system (autopilot, sec 0346 to 0350, 0390-0329).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Margolin as taught by Duggan for the purpose of incorporating an autopilot to ensure smooth transitions (Duggan abstract, sec 0014, 0085, 0086).

The different embodiments in both prior arts are combinable as it would be obvious to one having ordinary skill in the art.

It is believed that the rejection is proper and thus shall stand. Applicant may file an RCE, Appeal to the Board, or abandon the case.

### **Conclusion**

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### **Communication**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RONNIE MANCHO whose telephone number is (571)272-6984. The examiner can normally be reached on Mon-Thurs: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tran Khoi can be reached on 571-272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Ronnie Mancho/  
Primary Examiner, Art Unit 3664

/Ronnie Mancho/  
Primary Examiner, Art Unit 3664