



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.
-----------------	-------------	----------------------	---------------------	------------------

11/736,356

04/17/2007

Jed Margolin

3649

23497 7590 09/14/2011
JED MARGOLIN
1981 EMPIRE ROAD
RENO, NV 89521-7430

EXAMINER

MANCHO, RONNIE M

ART UNIT	PAPER NUMBER
----------	--------------

3664

MAIL DATE	DELIVERY MODE
-----------	---------------

09/14/2011

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

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 11/736,356
Filing Date: April 17, 2007
Appellant(s): MARGOLIN, JED

Jed Margolin

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/16/2011 appealing from the Office action mailed
2/15/2011

Art Unit: 3664

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

1-14.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN

Art Unit: 3664

REJECTIONS.” New grounds of rejection (if any) are provided under the subheading “NEW GROUNDS OF REJECTION.”

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant’s brief.

(8) Evidence Relied Upon

5904724	Margolin	5-1999
20050004723	Duggan et al	01-2005

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

i). 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.

ii). 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

Art Unit: 3664

(see for e.g. any type of remote aircraft used by recreational enthusiast; col. 3, 16-19, lines 50, 51; col. 5, lines 65-6. These at least indicate that the airspace is a 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; 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:

Art Unit: 3664

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, 0390-0392).

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 examiner respectfully asserts that since the airspace in the prior art is referred to as any environment which the prior art aircraft can fly it implies that the prior art airspace is not restricted to any particular airspace. As such the prior art at least contemplates a civilian airspace as claimed. In addition, since the prior art indicates that the remote aircraft can be of any type e.g. flown by a RECREATIONAL ETHUSIAST the prior at least contemplates that the remote aircraft if flown in a civilian space.

The examiner further respectfully asserts that a "synthetic vision system" has been interpreted as used in appellant's specification to refer to a 3-D vision system (appellants specification filed 4/17/2007, section 002). Appellant specification section 003 even admits that the prior art of record US (5904724) discloses a synthetic vision system as claimed.

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:

Art Unit: 3664

(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;
- 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;

Art Unit: 3664

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).

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).

Art Unit: 3664

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;

(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.

Art Unit: 3664

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, 0390-0392).

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 ne 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.

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

Art Unit: 3664

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:

(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;

Art Unit: 3664

(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, 0390-0392).

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.

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

Art Unit: 3664

channel for Air Traffic Control and the pilots of other aircraft to communicate directly with said remote pilot.

(10) Response to Argument

At page 15 of the brief appellant alleges that the examiner is not aware that Margolin (appellant) is the same person as the Margolin disclosed in the prior art of record during a telephone interview. The examiner does not recall any interview in which Margolin was debated as being the inventor or not. The examiner further respectfully submits that the argument is irrelevant to the appeal brief.

Appellant appears to misinterpret the final rejection at page 15 of the brief. The examiner did not say that the prior art, US (5904724) discloses all of the limitation “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”. The examiner used a combination of two prior arts in a 35 USC 103 (a) combination to reject the cited limitation. It appears that appellant is separating the prior arts to make an argument based on a 102 rejection. However, there is no 102 rejection in the final office action. Appellant in the abstract of their specification admits that the prior art US (5904724) anticipates the limitation, “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”. As such the basis of the argument is not understood since appellant does not contest the motivation to combine references, but only insist that both US (5904724)

Art Unit: 3664

and (US 2005004723) have been inappropriately used beyond the broadest possible interpretation. Appellant fails to provide any reason to support the statement that prior arts have been used beyond the broadest possible interpretation. At best the examiner can only assume that the appellant is making conclusory statements with no support.

Further, the appellant makes statements such as, "They certainly fail to make a *prima facie* case for rejection" instead of --They certainly fail to make a *prima facie* case of obviousness rejection--. Thus it is respectfully submitted that appellant is arguing a 102 rejection, which 102 rejection is not in the final office action under appeal.

The prior art Margolin, US (5904724) discloses a similar invention to that of the appellant. However, *Margolin did not disclose that the aircraft 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, 0390-0392).

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 examiner respectfully asserts that since the airspace in the prior art is referred to as any environment which the prior art aircraft can fly it implies that the prior art airspace is not

Art Unit: 3664

restricted to any particular airspace. As such the prior art at least contemplates a civilian airspace as claimed. In addition, since the prior art indicates that the remote aircraft can be of any type e.g. flown by a RECREATIONAL ETHUSIAST the prior at least contemplates that the remote aircraft if flown in a civilian space.

The examiner further respectfully asserts that a "synthetic vision system" has been interpreted as used in appellant's specification to refer to a 3-D vision system (appellants specification filed 4/17/2007, section 002). Appellant specification section 003 even admits that the prior art of record US (5904724) discloses a synthetic vision system as claimed.

The appellant is a pro se and the office tried to help the appellant to explain how MPEP was interpreted to reject the claims. However, appellant in the reply to the first office action dated 9/01/2010 furnished a response that was 75 pages (see appellant's response dated 11/29/2010). When asked why he submitted such a large swath of pages that mostly were about appellants personal papers referring to appellant's rents, taxes, personal contracts, etc appellant responded that he is trying to be diplomatic by submitted such large swaths of irrelevant documents even though appellant's specification is only 16 pages.

The examiner believes that appellant's claims were all addressed. Some of the claims are have similar limitations only that the wording in some of the claims is different. As such the examiner refers the appellant back to the rejection of the claims that are similar. Appellant took on this position to indicate that the claims were ignored. The examiner respectfully does not acquiesce to the allegations since the sections cited and quoted by appellant are believed to read on the claims. As such appellant's remarks citing MPEP 2143.03 is controversial since appellant

Art Unit: 3664

has concurred that the examiner has cited sections that are believed to read on the claims. As such it is respectfully submitted that all claim limitations were considered.

Some of appellant's remarks are that the prior art do not recite the phrase, "safely flying an unmanned aerial vehicle in civilian airspace comprising: ...". Appellant thus insists that the rejection is conclusory. 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 "safety". It is believed that the aircraft flown in the prior art is flown with at least some safety since the pilot is required to practice flying the aircraft using a simulation 609. All aircraft pilots must go to school and practice before they are licensed to fly any aircraft be it civilian or military. In addition, the aircraft of the prior art at least anticipates the structure and operation of aircraft in the invention.

Now appellant's appeal brief is 506 pages long. Most of the material submitted by appellant is irrelevant to the appeal to the board because the material was not provided to the examiner for consideration during prosecution of the case. Appellant is making remarks relying on documents that the examiner was never given an opportunity to review during prosecution of the case. As such the examiner respectfully submits that comments about such arguments related to the such documents are irrelevant to the appeal brief to the Board.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Art Unit: 3664

Respectfully submitted,

/Ronnie Mancho/

Acting Examiner of Art Unit 3663

Conferees:

Ronnie Mancho /Ronnie Mancho/

/KHOI TRAN/

Supervisory Patent Examiner, Art Unit 3664

Brian K. Green /BKG/