

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PARROT S.A., PARROT DRONES S.A.S., and PARROT INC.,
Petitioners

v.

QFO LABS, INC.,
Patent Owner

U.S. Patent No. 7,931,239

“Homeostatic Flying Hovercraft”

Inter Partes Review No. 2016-01550

**PETITIONERS’ OPPOSITION TO PATENT OWNER’S
CONTINGENT MOTION TO AMEND**

TABLE OF CONTENTS

	<u>Page</u>
I. Introduction.....	1
II. PO’s Motion Fails to Meet its Burden.....	3
A. PO’s Expert Testimony Should be Disregarded	4
B. PO Addresses Only Prior Art Of Record	5
C. PO’s Discussion of <i>Louvel, Thomas, and Kroo</i> is Facially Deficient	6
1. <i>Louvel, Thomas, and Jimenez</i>	7
D. The Motion Fails to Identify All of the Prior Art Known to PO	8
III. Proposed Claim 11 is Not Patentably Distinct Over the Prior Art.....	9
A. <i>Sato</i> Expressly Discloses the Additional Limitations	10
1. Overview of <i>Sato</i>	10
2. <i>Sato</i> Expressly Discloses Limitation 11b	11
3. <i>Sato</i> Expressly Discloses Limitation 11c.....	14
4. <i>Sato</i> Expressly Discloses Limitation 11f.....	14
B. A POSA Would Have Been Motivated to Combine <i>Sato</i> with <i>Louvel</i>	15
1. <i>Nagamitsu</i> Discloses the Additional Limitations	19
(a) Overview of <i>Nagamitsu</i>	19
(b) <i>Nagamitsu</i> Expressly Discloses Limitation 11b.....	19
(c) <i>Nagamitsu</i> and <i>Jimenez</i> Expressly Disclose Limitation 11c.....	20
(d) <i>Nagamitsu</i> Expressly Discloses Limitation 11f	21
(e) A POSA Would Have Been Motivated to Combine <i>Nagamitsu</i> , as modified by <i>Jimenez</i> , with <i>Louvel</i>	22
IV. Proposed Claim 11 is Unpatentable under 35 U.S.C. § 101	24
V. Claim 11 is Unpatentable Under the Doctrine of Double Patenting	24
VI. Conclusion	25

TABLE OF AUTHORITIES

Cases

<i>Corning Optical Commc'ns RF, LLC v. PPC Broadband, Inc.</i> , IPR2014-00441, Paper 19 (P.T.A.B. Oct. 30, 2014).....	5
<i>Global Tel*Link Corp. v. Securus Techs., Inc.</i> , IPR2015-01225, Paper 45 (P.T.A.B. Dec. 14, 2016)	4, 8, 25
<i>Idle Free Sys., Inc. v. Bergstrom, Inc.</i> , IPR2012-00027, Paper 26 (P.T.A.B. June 11, 2013)	4, 6, 7
<i>Shelcor, Inc. v. Durham Indus., Inc.</i> , 745 F.2d 621 (Fed. Cir. 1984)	24
<i>In re Van Ornum</i> , 686 F.2d 937 (C.C.P.A. 1982).....	24
<i>In re Vogel</i> , 422 F.2d 438 (C.C.P.A. 1970).....	24
<i>Int'l Flavors & Fragrances Inc. v. U.S. Dep't of Agric.</i> , IPR2013-00124, Paper 12 (P.T.A.B. May 20, 2014)	1, 5

Rules / Statutes

35 U.S.C. § 101	24
35 U.S.C. § 102(b)	19
37 C.F.R. § 42.20(c).....	4

LIST OF PETITIONERS' EXHIBITS

No.	Description
Ex. 1001	U.S. Patent No. 7,931,239 to Pedersen <i>et al.</i>
Ex. 1002	File History of U.S. Patent No. 7,931,239
Ex. 1003	Declaration of Dr. Girish Chowdhary
Ex. 1004	U.S. Patent Application No. 2002/0104921 to Louvel
Ex. 1005	M. Gordon <i>et al.</i> , "Rotorcraft Aerial Robot – Challenges and Solutions," Georgia Institute of Technology, School of Aerospace Engineering (October 25-28, 1993)
Ex. 1006	U.S. Patent No. 5,128,671 to Thomas, Jr.
Ex. 1007	U.S. Patent Application No. 2002/0106966 to Jimenez <i>et al.</i>
Ex. 1008	U.S. Patent No. 6,847,865 to Carroll
Ex. 1009	U.S. Patent No. 6,588,701 to Yavnai
Ex. 1010	Declaration of Coral Sheldon-Hess
Ex. 1011	Printout of Website at http://www.aerialroboticscompetition.org/
Ex. 1012	Printout of Website at http://www.aerialroboticscompetition.org/pastmissions.php
Ex. 1013	Printout of Website at http://www.aviastar.org/helicopters_eng/bothezat.php
Ex. 1014	U.S. Provisional Patent Application No. 60/324,931
Ex. 1015	Printout of Website at https://en.wikipedia.org/wiki/File:Lift_curve.svg
Ex. 1016	Printout of Website at https://www.grc.nasa.gov/www/k-12/airplane/right2.html
Ex. 1017	Printout of Website at http://www.aerialroboticscompetition.org/past_missions/pastmissionimages/mission3/robots2.png
Ex. 1018	Printout of Website at

	https://upload.wikimedia.org/wikipedia/commons/thumb/5/59/Quadrotorhover.svg/220px-Quadrotorhover.svg.png
Ex. 1019	Gavrilets, Vladislav, <i>Avionics systems development for small unmanned aircraft</i> , Diss. Massachusetts Institute of Technology, 1998.
Ex. 1020	Weilenmann, Martin F., Urs Christen, and Hans P. Geering, "Robust helicopter position control at hover," <i>American Control Conference, 1994</i> . Vol. 3. IEEE, 1994.
Ex. 1021	Shim, David Hyunchul, Hyoun Jin Kim, and Shankar Sastry, "Hierarchical control system synthesis for rotorcraft-based unmanned aerial vehicles," <i>AIAA Guidance, Navigation and Control Conference</i> . 2000.
Ex. 1022	Shim, H., et al., "A comprehensive study of control design for an autonomous helicopter," <i>In: Proc. 37th IEEE Conf. on Decision and Control (CDC'98)</i> , 1998.
Ex. 1023	Frazzoli, Emilio, Munther A. Dahleh, and Eric Feron, "Real-time motion planning for agile autonomous vehicles," <i>Journal of Guidance, Control, and Dynamics</i> 25.1 (2002): 116-129 (Ex. 1022).
Ex. 1024	U.S. Patent No. 3,053,480 to Vanderlip <i>et al.</i>
Ex. 1025	Declaration of Gregory C. Wyckoff in Support of Petitioners' Unopposed Motion for Pro Hac Vice Admission
Ex. 1026	Petition for <i>Inter Partes Review</i> in IPR2017-01400
Ex. 1027	<i>Complaint and Jury Demand</i> , filed on October 12, 2016 in Case No. 0:16-cv-03443-JRT-HB (D. Minn.)
Ex. 1028	U.S. Patent No. 5,590,062 to Nagamitsu <i>et al.</i>
Ex. 1029	I. Kroo <i>et al.</i> , "Mesoscale Flight and Miniature Rotorcraft Development," Stanford University, <i>published in</i> T.J. Mueller , "Fixed and Flapping Wing Aerodynamics for Micro Air Vehicle Applications, <i>Progress in Astronautics and Aeronautics</i> ," pp. 503-

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.