

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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ARASHI VISION (U.S.) LLC (D/B/A INSTA360)  
Petitioner,

v.

GOPRO, INC.  
Patent Owner.

Patent No. 10,574,894

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*Inter Partes* Review No. IPR2024-01186

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**PETITIONER'S OPPOSITION TO PATENT OWNER'S  
MOTION TO STRIKE**

## I. INTRODUCTION

The Reply introduced no new theory. From the start, the Petition argued that Kwatra’s cost function minimizes rotational velocity and rotational acceleration. The Reply simply cited Kwatra paper—disclosing the same function—and Patent Owner GoPro’s own documentation acknowledging it. That evidence is confirmatory, not new, and directly rebuts GoPro’s arguments. GoPro faces no prejudice, as it was aware of its own documentation and has ample opportunity to respond. Petitioner Insta360 urges the Board to deny GoPro’s motion to strike.

## II. BACKGROUND

Insta360’s Petition argued that prior art Zhou and Kwatra render obvious all claims of the ’894 patent. Independent claim 1 recites, among others, “a path that **minimizes a combination of rotational velocity and rotational acceleration** of the housing.” (EX1001, Claim 1 (emphasis added).)

The Petition explained that Kwatra discloses this limitation. Specifically, Kwatra’s cost function (*i.e.*, objective function; reproduced below) “is used to generate a smoothed camera path that includes minimizing a combination of rotational velocity ( $\frac{dP}{dt}$ ) and rotational acceleration ( $\frac{d^2P}{dt^2}$ ) of the housing.” (Paper 1, 33.)

$$a \left| \frac{dP}{dt} \right| + b \left| \frac{d^2P}{dt^2} \right| + c \left| \frac{d^3P}{dt^3} \right|$$

GoPro disputed this in its Response, arguing that Kwatra’s cost function “does *not* result in minimization of a combination of *rotational* velocity and acceleration as claimed.” (Paper 17, 18 (emphasis in original).) Per GoPro, Kwatra’s cost function minimizes only linear, not rotational, motion. (*Id.* at 10.)

In response to GoPro’s mistaken characterization of Kwatra, in its Reply, Insta360 discussed Kwatra’s related and highly similar publication “Kwatra paper” and GoPro’s engineers’ own interpretation of it. Insta360 stated that “Kwatra paper teaches the same minimization approach as Kwatra,” disclosing “‘the optimal stable camera path  $P(t)$  minimizing the objective’ function”:

$$\mathcal{O}(P) = w_1|D(P)|_1 + w_2|D^2(P)|_1 + w_3|D^3(P)|_1 \quad (3)$$

(Paper 25, 14 (citing EX1023, 227).) Insta360 explained Kwatra paper’s objective function is the same as Kwatra’s cost function. (*Id.* at 14-15.)

Insta360 further discussed GoPro’s own documentation describing its development of the claimed video stabilization technologies. That documentation was produced in the concurrent ITC investigation—*after* Insta360 submitted its Petition. In that documentation, GoPro expressly admitted that its video stabilization technology is based on Kwatra paper. (Paper 25, 13 (citing (EX1022, 7).) When describing Kwatra paper, GoPro stated that its “objective function is expressed as a combination of the camera’s angular velocity and acceleration over

time.” (*Id.* at 14 (EX1022, 18).) Thus, GoPro’s own acknowledgment that Kwatra and Kwatra paper’s cost function minimizes angular (*i.e.*, rotational) velocity and acceleration directly rebuts its now litigation-driven argument to the contrary. (*Id.*)

### **III. ARGUMENT**

#### **A. The Reply Properly Elaborated on Insta360’s Original Theory and Responded to GoPro’s Arguments**

As GoPro acknowledges, the Reply’s discussion of Kwatra paper and GoPro’s development documentation merely responds to its “argument that Kwatra discloses only linear models and expressly avoids rotational optimization.” (Paper 30, 3.) Unable to dispute this, GoPro instead contends that Kwatra paper is “a new piece of prior art.” (*Id.*) Not so. Kwatra paper is not a new reference, but confirmatory evidence supporting Insta360’s original theory.

*Apple Inc. v. Andrea Elecs. Corp.*, 949 F.3d 697 (Fed. Cir. 2020) is instructive. There, the Federal Circuit found that the Board abused its discretion by refusing to consider arguments and evidence raised in the reply. *Id.* at 705-07. The Federal Circuit emphasized that the petitioner’s “legal ground did not change in its reply” and the reply “relie[d] on the same algorithm from the same prior art reference to support the same legal argument.” *Id.* at 706.

That is exactly the case here. It is undisputed that the Petition already relied on Kwatra’s cost function. The Reply cited Kwatra paper’s disclosure of the same

function. The Reply's citation to Kwatra paper and GoPro's own discussion of it does not raise a new ground. Rather, it confirms and reinforces the Petition's original theory that Kwatra discloses minimizing rotational velocity and rotational acceleration. This is different from GoPro's cited cases, which concerned new arguments not previously raised in the Petition. *See Laboratoire Francais Du Fractionnement Et Des Biotechnologies S.A. v. Novo Nordisk Healthcare AG*, IPR2017-00028, Paper 109 at 16-22 (PTAB Apr. 13, 2022); *Haag-Streit AG v. Eidolon Optical, LLC*, IPR2018-01311, Paper 31 at 2-8 (PTAB Sept. 5, 2019).

Moreover, the Reply's discussion of Kwatra paper and GoPro's development documentation is proper rebuttal to GoPro's Response. The Federal Circuit has long recognized that a petitioner "may introduce new evidence after the petition stage if the evidence is a legitimate reply to evidence introduced by the patent owner." *Anacor Pharms., Inc. v. Iancu*, 889 F.3d 1372, 1380-82 (Fed. Cir. 2018). Here, GoPro argued in its Response that Kwatra's cost function does not minimize rotational movement. The Reply simply relied on GoPro's own engineers' characterization of the same cost function to rebut that argument. That is a proper and expected use of rebuttal evidence.

## **B. There Is No Unfair Prejudice**

GoPro's claim of prejudice is equally misplaced. GoPro faults Insta360 for not citing Kwatra paper in the Petition, when Insta360 had access to it then. But

Insta360 is not relying on Kwatra paper in isolation. The Reply discussed Kwatra paper together with GoPro's engineers' characterization of it in GoPro's internal documentation. GoPro did not produce that documentation in the ITC proceeding *until after* Insta360 filed the Petition. Insta360 thus could not have relied on GoPro's admissions regarding Kwatra paper's cost function at the Petition stage.

GoPro's assertion that it cannot "respond on equal footing" because it cannot introduce new declarations is unfounded. (Paper 30, 4.) The Federal Circuit has made clear that "the regulations governing *inter partes* review proceedings provide patent owners with procedural mechanisms [] to respond to evidence raised in the petitioner's reply." *Genzyme Therapeutic Prods. Ltd. P'ship v. Biomarin Pharm. Inc.*, 825 F.3d 1360, 1368 (Fed. Cir. 2016). GoPro has those mechanisms here. It may respond to the Reply evidence by questioning Insta360's expert at deposition, in its sur-reply, and at oral hearing. Indeed, GoPro acknowledges in its motion that it intends to address the Reply evidence in its sur-reply. (Paper 30, 3.)

Finally, the Reply does not rest on speculation about "what GoPro engineers believed," as GoPro suggests (*id.* at 4). It relies on the plain language of GoPro's internal documentation. GoPro is free to argue for a different interpretation in its sur-reply. But that is a dispute on the merits, not a basis to strike the Reply.

#### **IV. CONCLUSION**

For the above reasons, the Board should deny GoPro's motion to strike.

IPR2024-01186

Dated: September 3, 2025

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**Certificate of Service (37 C.F.R. § 42.6(e)(4))**

I hereby certify that the attached PETITIONER'S OPPOSITION TO PATENT OWNER'S MOTION TO STRIKE was served on the below date via e-mail (by consent) to the following counsel of record for the Patent Owner:

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Dated: September 3, 2025

/s/ Alex S. Yap  
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