

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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**SAMSUNG ELECTRONICS CO., LTD, and  
SAMSUNG ELECTRONICS AMERICA, INC.,**  
Petitioner,

v.

**CELLECT, LLC,**  
Patent Owner.

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Case IPR2020-00561  
U.S. Patent No. 6,982,742

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**PETITIONER'S REPLY TO §325(d) ARGUMENTS IN  
PATENT OWNER'S PRELIMINARY RESPONSE**

Because the art and arguments considered during prosecution are not the same or substantially the same as the art or arguments contained in the Petition, the Board should not exercise discretion pursuant to §325(d). Moreover, the art considered during prosecution identified in Patent Owner's ("PO") Preliminary Response ("POPR") was applied to different claims with different scope, never to the Challenged Claims 42, 58, and 66, and never in the combination as proposed in the Petition. Still more, the POPR takes positions that directly contradict representations PO made during prosecution. As set forth in the Petition, the IPR should be instituted.

**I. The Petition Does Not Present Substantially the Same Art or Arguments**

To be clear, the substance of the Harris in view of Swift and Ricquier ground, as well as the same ground in further view of Tanaka and/or Tran, was *never* considered by the Patent Office. While Harris was considered during prosecution of the parent to the '742 (the '369 patent), the parent's claims were substantially different from the Challenged Claims. Specifically, the '369's claims require a "flexible cable connection" between "the camera and the housing of the PDA," while the '742's claims require an RF link between the two, as disclosed in Harris. Pet. 14, 19-20.

Significantly, PO overcame the Examiner's rejections of Harris in view of Upton in the '369's prosecution by arguing that Harris did not possess limitations that are not present in the '742's claims (*see id.*) and that Upton does *not* disclose the camera structure recited in the '742 claims. In particular, PO argued that Upton

does not have “a single drawing or explanation of how a CMOS camera on chip could be modified to split and rearrange elements of the CMOS camera.” Ex. 1077, 132-33. Relying on PO’s arguments, the Examiner withdrew the rejection and issued a Notice of Allowance, noting the lack of disclosure of relevant camera components in the art. *Id.*, 157. In contrast, the teachings of Swift and Ricquier in the proposed Harris grounds disclose the relevant camera structure limitations—disclosing both the arrangement of an image sensor and processing circuitry in first and second planes (as taught by Swift), and the placement of timing and control circuitry separate from the image sensor (as taught by Ricquier). *E.g.*, Pet., 19-31. Thus, far from being “substantially the same,” the Petition’s proposed grounds squarely address the subject matter deemed missing from the prior art during the earlier prosecution.

PO’s further assertions that other references (Pelchy, Danna, Zarnowski) considered during ’839’s prosecution (the ’742’s great grandparent through continuations-in-part) are substantially the same as Swift and Ricquier are belied not only by the references themselves, but also by PO’s prosecution arguments.<sup>1</sup>

PO’s assertion that Pelchy and Zarnowski considered in ’839’s prosecution

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<sup>1</sup> While the POPR (17-28) also discusses several other references, such as Drottar and Lenhardt, PO does not assert that these references are substantially the same as any reference in the proposed grounds. Indeed, they are not.

are substantially the same as Swift and Ricquier is simply incorrect. (Zarnowski is referred to as “*Laser Focus*” in ’839’s prosecution. Ex. 1003, 100.) As PO argued during the ’839 prosecution, Pelchy discloses a TAB approach that is applicable only to **CCD** image sensor architecture and that could not be modified with Zarnowski’s teachings of **CMOS** image sensors. Ex. 1003, 92-94, 138-42. PO distinguished Pelchy’s mention of “CMOS” in its Background and asserted that Pelchy cannot be combined with Zarnowski’s CMOS image sensor because the express and clear purpose in Pelchy “for providing tape automated bonding [TAB] is defeated if a CMOS based imager is used within the structure of Pelchy.” *Id.* In contrast to PO’s assertions in prosecution, the Petition asserts a POSITA would have been motivated to apply Ricquier’s teachings of a **CMOS** image sensor with an off-chip driving unit to Swift’s **CMOS** image sensor. Pet., 24-31. Thus, the alleged incompatibility between Pelchy and Zarnowski in prosecution does not exist between Swift and Ricquier.

Moreover, in asserting Pelchy is substantially the same as Swift, PO incorrectly asserts that Swift discloses **CCD** image sensor arrangements, even though Swift explicitly discusses CMOS image sensors. POPR, 31-33. As an initial matter, PO’s assertion that the image sensor in Swift *could* be CCD is irrelevant because the Petition relies on Swift’s *express* teachings of a CMOS image sensor. PO’s attorney argument comparing embodiments in Swift and the ’742 cannot change Swift’s ex-

press disclosures of a “CMOS” image sensor. *E.g.*, *Unified Patents v. Fall Line Patents*, IPR2018-00043, Pap. 6, \*29 (rejecting patent owner’s attorney argument contradicting teachings of the prior art reference). And contrary to PO’s POPR assertions (at 32-33), its expert’s prosecution testimony in the ’839 patent that “on-chip processing ... is impractical with standard CCD technology” does not support its argument. Rather, this supports only that on-chip processing indicates a CMOS image sensor, but says nothing about whether—and certainly does *not* support—any “off-chip circuitry” mandates a CCD image sensor. And more generally, PO’s expert’s testimony during the ’839’s prosecution addressed why he thought Pelchy’s TAB process was a CCD implementation (Ex. 1003, 91-93)—not whether Swift’s “CMOS” disclosures are instead CCD.

PO’s argument that Swift is substantially the same as Danna is more of the same attempt at sleight of hand. PO again attempts to rewrite Swift, mislabeling its CMOS image sensor as a CCD sensor. From there, it wrongly attempts to equate Swift’s image sensor to Danna’s “CCD image sensor.” POPR, 34-35, 47.

Swift is also superior to Zarnowski, which merely describes tradeoffs of CCD, CMOS, and hybrid image sensors. PO does not identify any disclosure in Zarnowski that is substantially similar to the actual content of Swift. For example, Zarnowski does not disclose a CMOS image sensor that is on a different plane than video processing circuitry like Swift discloses. Zarnowski does not identify any particular

CMOS image sensor configuration—referring generically to “[t]rue CMOS imagers”—much less identify any particular amplifier or image sensor. Ex. 2007, 4.

In arguing that Swift is substantially similar to Zarnowski, PO asserts “given that Swift utilizes Fossum’s CMOS APS imager, the off-chip circuitry described in Swift is implemented *on chip* in the CMOS embodiments, as also disclosed and explained in Zarnowski” (POPR, 33, 35-36) even though Swift expressly teaches a CMOS “image sensor 51,” and an external “circuit board 53” on which “circuitry components are mounted ... [to] ... process image signals received [from image sensor 51].” *See* Pet., 42; Ex. 1005, 9:5-13, 10:1-2. Indeed, Swift merely states that “information on APS-type sensors may be found in” Fossum’s *Laser Focus World* article (Ex. 1005, 10:4-6)—not that it uses Fossum’s design. And the 1995 *BusinessWeek* article about Fossum, on which PO relies, is never mentioned in Swift and was published after Swift was filed in 1994. POPR, 35-36, 69-70 (citing Ex. 1060). Neither reference can rewrite Swift’s expressly disclosed arrangement of the processing circuitry on a board separate from the CMOS image sensor.

Ricquier is also not substantially the same as Zarnowski at least because Zarnowski does not disclose Ricquier’s *off-chip* timing and control configuration relied on by Petitioner. The Petition relies on Ricquier’s teaching of an “*off-chip driving unit*” including a “timing controller” for limitations requiring timing and control separate from the pixel array of the image sensor. Pet., 44; *see also* Pet., 25-26 (citing

Ex. 1033, 4, 6, 10) (Fig. 1 annotated). PO does not dispute that Zarnowski fails to disclose this feature, but instead misleadingly focuses on Ricquier's *on-chip* circuitry upon which Petitioner does not rely. POPR, 36-37.

In support of its §325(d) argument that Ricquier has on-chip timing and control, the POPR cites two aspirational statements in Ricquier's introduction that are unrelated to timing and control placement. POPR, 36-37. One of these statements refers to "the *possibility of further cointegration of processing electronics* on the same chip." Ex. 1033, 10. The other statement merely points out that the authors are also working on "a multi-purpose flexible sensor architecture that *can be used* as a module *in further* sensor systems" on a single chip. Ex. 1033, 11. Neither statement contradicts Ricquier's express teaching of an "off-chip" timing controller. *Id.*, 12. Moreover, even if these statements suggested a plan by the authors to later implement on-chip timing and control as PO argues, the statements do not teach away from Ricquier's "off-chip" timing controller teachings. *Meiresonne v. Google, Inc.*, 849 F.3d 1379, 1382 (Fed. Cir. 2017) (teaching away requires the reference to "criticize, discredit, or otherwise discourage investigation into the claimed invention"; "a general preference for an alternative" is insufficient). PO also does not dispute that the Examiner did not consider the Petition's additional argument that there were a finite number of locations to place timing and control circuitry relative to the image

sensor and video processing circuitry in Swift, or that the results of applying Ricquier's teachings to Swift would have been predictable. *See* Pet. 6, 24-31.

Moreover, PO's implicit assertion that the circuitry on-chip in Ricquier includes the timing and control circuitry based on the alleged inclusion of latches, decoders and switches on Ricquier's image sensor is also wrong. POPR, 37; *see also id.*, 12-13. None of the components PO alleges are on the image sensor are part of the "timing and control circuitry." In fact, the '742 explicitly shows latches and decoders as being **external** to the "timing and control circuits," and thus these components are not part of the "timing and control circuits." '742, Fig. 9a. The '742 explains that, while the timing and control circuits 92 "control the release of image information or image signal stored in the pixel array," the latches, counter and decoder control "the information" that is released. Ex. 1001, 16:9-12, 16:45-47. The "G<sub>reset</sub> switch" and "K<sub>reset</sub> switch" that PO identifies (POPR, 37) are merely the components that operate in response to the control signals provided by the off-chip "timing controller." Ex. 1033, 2. If, as PO argues, all on-chip circuitry that operates **in response to** the off-chip "timing controller" were **part of** the claimed off-chip "timing and control circuits," it would be impossible to implement the claimed invention.

Failing to show commonality between Ricquier and Zarnowski with respect to the "off-chip" teachings relied on in the Petition, PO instead focuses on Zarnowski's "amplifiers at the end of the columns" and "[p]assive CMOS sensors" with



“on-chip video amplification,” not timing and control. POPR, 38. However, because the Petition does not rely on Ricquier for its amplifier, it is irrelevant whether both Ricquier and Zarnowski disclose amplifiers. Because Zarnowski does not teach off-chip timing and control, it is not substantially the same as Ricquier.

PO compounds its misrepresentations of the prosecution record in contending that Harris in view of Swift and Ricquier is “the exact same combinations of conventional CCD and CMOS image devices already considered by the Office,” by conflating the ’839’s rejection over Pelchy and Zarnowski and the ’369’s rejection over Harris and Upton. POPR, 50-53. Even if the Examiner had rejected the ’742 claims over Harris in view of Pelchy and Zarnowski (he did not), the rejection would not have been substantially the same as the Petition’s grounds for the reasons above.

Because the art and arguments presented in the Petition’s Ground 1 based on the Harris in view of Swift and Ricquier are not substantially the same as those considered during prosecution, the Board need not reach Petition Grounds 2-4, which further apply the teachings of Tran and/or Tanaka to Ground 1. Regardless, PO’s arguments regarding Tran (POPR, 39-42) and Tanaka (POPR, 38-39, 53) are also unavailing. Tran’s teachings are applied in only Grounds 3-4 to the extent that further disclosure of an “amplifier section for amplifying video and audio signals transmitted by another party” is required. Pet., 78-79. However, in view of PO’s argument that Harris also contains these same disclosures (POPR, 40), there is no need to turn

to Grounds 3-4. While PO also identifies Jacobsen as being substantially similar to Tran, PO makes no attempt to show that Jacobsen discloses an amplifier (indeed, Jacobsen does not mention an amplifier for amplifying signals from another party). PO's Tanaka arguments are similarly misleading as the Petition relies on Tanaka to address the situation where §112(6) applies to "circuitry means for processing and converting said pre-video signal to a desired video format" (Pet. 82-84), and the Examiner did not address whether §112(6) applies to any terms of the '742 patent.

## **II. Error in Allowing the Challenged Claims**

### **A. Because the Examiner Did Not Consider Substantially the Same Art or Arguments, No Showing of Error Is Required**

Because the grounds presented in the Petition do not rely on the same or substantially the same art or arguments as applied during prosecution, there is no need to show that the Office committed error. *Advanced Bionics v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Pap. 6, \*8. In fact, the Challenged Claims were never rejected at all, let alone on the basis of substantially the same art as advanced in the Petition. Ex. 1002, 120, 198.

Indeed, where the "Examiner did not expressly consider [the reference] on the record," it is difficult, if not impossible, to explain "why the Examiner allowed the claims" or "how the Examiner might have considered the arguments presented in the Petition." *Bowtech, Inc. v. MCP IP, LLC*, IPR2019-00379, Pap. 14, \*20 (declining to exercise discretion under §325(d)). Thus, for this further reason, an exercise of

discretion under §325(d) is not appropriate here.

**B. The Office Erred in a Manner Material to Patentability By Failing to Apply the Art of Record Based Upon PO's Arguments**

Even accepting for the sake of argument that PO's new characterizations of the prior art are correct (*i.e.*, that Pelchy contains similar disclosures as Swift's CMOS image sensor and Zarnowski contains similar disclosures as Ricquier's off-chip timing and control circuitry), the Examiner would have erred failing to recognize that—contrary to PO's prosecution arguments—Pelchy in view of Zarnowski renders obvious the claimed camera structure. If the Examiner had recognized this, just as the Examiner combined Harris with Upton for the '369 prosecution (where Upton failed to disclose the correct camera structure), the Examiner would have correctly combined Pelchy and Zarnowski with Harris to reject the Challenged Claims. Thus, but for PO's misrepresentations and/or the Examiner's failure to recognize that a POSITA would have been motivated to apply Pelchy's and Zarnowski's teachings to Harris, the Examiner would not have erred in allowing the Challenged Claims. *See HTC v. Motiva*, IPR2019-01664, Pap. 9, \*10 (declining to exercise §325(d) discretion because Examiner erred by failing to apply art to the challenged claims even though the art was applied to invalidate claims of similar scope in a related patent). For these additional reasons, the Board should not exercise its §325(d) discretion.

PO's §325(d) arguments should be rejected and this IPR should be instituted.

Date: June 22, 2020

Respectfully submitted

By: /Scott A. McKeown/  
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**CERTIFICATE OF SERVICE**

The undersigned certifies that a copy of the foregoing PETITIONER'S  
REPLY TO §325(d) ARGUMENTS IN PATENT OWNER'S PRELIMINARY  
RESPONSE was served in its entirety by causing the aforementioned document to  
be electronically mailed, pursuant to the parties' agreement to the following  
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