

## Camera on a Chip: PTAB Invalidates Imaging Sensor Patent

***Samsung Elecs. Co., Ltd. v. Collect, LLC,*  
IPR2020-00476 (P.T.A.B. June 30, 2021)**

By: Lisa Holubar & Ted Mahan | July 12, 2021

Invalidating claims of a patent directed to system architecture combining imaging sensors with timing and control circuits, the Patent Trial and Appeal Board (“PTAB”) clarified the landscape of state-of-the-art developments at pixel scale. In a seventy-seven page final written decision, the PTAB determined five claims of U.S. Patent No. 9,198,565 were obvious in light of two references, clearing the way for Samsung to continue selling endoscope products embodying related technology advances.

Subject to infringement allegations in the District of Colorado—*Collect, LLC v. Samsung Elecs. Co., Ltd.*, 1-19-cv-00438—Samsung petitioned for *inter partes* review of the ’565 Patent, along with ten other related patents. The ’565 Patent relates to “camera on a chip” technology with rearranged circuitry to minimize the volumetric profile for use in surgical instruments, such as an endoscope. Generally, the claims at issue cover an imaging device, including an imaging sensor and processing circuits that are combined in a housing. Further, the patent discloses two system architectures: one with the image sensor data being processed via planarly adjacent timing and control circuits, and a second arrangement where the processing circuitry is stacked.

Samsung petitioned for invalidity for obviousness under 35 U.S.C. § 103 in light of two references: U.S. Patent No. 5,903,706 (“Wakabayashi”) and U.S. Patent No. (“Ackland”). Addressing Collect’s evidence of nonobviousness in light of *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) first, the PTAB addressed the patent owner’s argument that five secondary considerations identified in *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966) provided support: 1) commercial success, 2) satisfaction of a longfelt but unresolved need, 3) industry praise, 4) unexpected results, and 5) industry skepticism/proceeding contrary to accepted wisdom. The PTAB was unpersuaded. The panel failed to find a nexus of the evidence provided and the claims for any of the factors. For example, no specific license of the ’565 Patent was identified, the claims do not require an endoscope as identified in evidence of a need for smaller such devices, the generalized language of an industry award failed to identify claim features, and Samsung’s expert testimony as to rearranging chip components was credited as within skilled artisans knowledge and was un rebutted. In sum, “the objective evidence of nonobviousness submitted by and relied on by Patent Owner is weak.”

Turning to the petitioner’s Wakabayashi and Ackland references, the PTAB found the elements of the imaging device claims with little difficulty. The more substantial task was analyzing the motivation to combine the teachings of Wakabayashi and Ackland, where “Wakabayashi discloses using a solid-state imager without indicating a specific type of solid-state imager [ ], and Ackland teaches using a CMOS imager for use in a solid-state camera [ ].” The petitioner’s “adequate reasoning with rational underpinnings” carried the day. This decision is a simple reminder to clearly and rationally connect specific facts to the specific issues when motivation to combine prior art is under the PTAB’s lens.