

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO. LTD.,
SAMSUNG ELECTRONICS AMERICA, INC.,
SAMSUNG SEMICONDUCTOR, INC., and
SAMSUNG AUSTIN SEMICONDUCTOR, LLC,

Petitioners

v.

CHIEN-MIN SUNG,

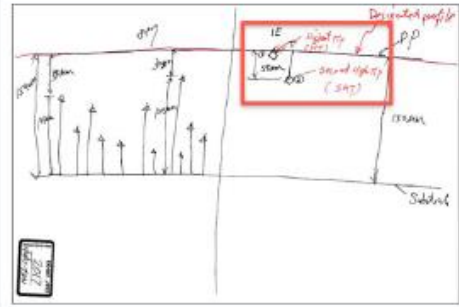
Patent Owner

IPR2024-00535
U.S. Patent No. 9,724,802

**PATENT OWNER'S OBJECTIONS TO PETITIONERS'
DEMONSTRATIVES**

Mail Stop PATENT BOARD
Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Submitted Electronically via PTACTS

32	Patent owner objects to this slide because it improperly relies on citations of Dr. Tsai's deposition testimony that were used in Peitioners' Reply to discuss the "designated profile" of the Tsai reference for a new and different purpose, to refute Patent Owner's contention that Sung '817 provides written description support for claim 1 of the '802 patent. 3. '817 Application Fails to Provide Support For [1E] & [1F] - Patent Owner's assertion in the Sur-Reply: "designated profile" = "highest protruding tip" - So "difference in protrusion distance" from "highest protruding tip" is taught  The diagram shows a substrate with a designated profile (a horizontal line) and several protruding tips (vertical lines). A red box highlights the designated profile and the protruding tips. A red arrow points to the designated profile with the label 'Designated profile for [1E]'. A red arrow points to the protruding tips with the label 'Protruding tips (Sung)'. A red arrow points to the difference in protrusion distance with the label 'Difference in protrusion distance (Sung)'. A small image of a patent document is shown in the bottom left corner. the same range up to 150 microns. That Sung '817 refers to the "designated profile" as opposed to "the difference in protrusion distance" is of no consequence since Dr. Tsai testified that a POSA would know that Sung '817's designated profile refers to the same point of reference recited in Limitation [1E][1F] (i.e., "highest protruding tip") of claim 1 of the '802 patent. As such, in one aspect a majority of the plurality of cutting elements is arranged such that the tips vary from the designated profile by from about 1 micron to about 150 microns. In another aspect, the plurality of cutting elements are arranged such that their tips vary from the designated profile by from about 5 microns to about 100 microns. In yet another aspect, the plurality of cutting elements are arranged such that their tips vary from the designated profile by from about 10 microns to about 75 microns. In a further aspect, the plurality of cutting elements are arranged such that their tips vary from the designated profile by from about 10 microns to about 50 microns. In another aspect, they Sur-Reply at 3, 6; Ex. 2017; Ex. 1055, 18018-1866 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE
33	Patent owner objects to this slide because it improperly relies on citations of Dr. Tsai's deposition testimony that were used in Peitioners' Reply to discuss the "designated profile" of the Tsai reference for a new and different purpose, to refute Patent Owner's contention that Sung '817 provides written description support for claim 1 of the '802 patent.

	3. '817 Application Fails to Provide Support For [1E] & [1F] Dr. Tsai did not even apply the definition of "profile" in interpreting "designated profile" As used herein, the term "profile" and "geometric profile" can be used interchangeably, and refer to a predetermined contour above a support substrate to which a plurality of superabrasive particles or other cutting elements are intended to align. Examples of such profiles may include, without limitation, flat or planar profiles, curved profiles, wavy profiles, convex profiles, concave profiles, multi-tiered profiles, and the like, including combinations thereof. Reply at 21; Ex. 1007, 6:21-28 Q: Did you apply that understanding of the term "profile" as written in column 6, lines 21 through 25, when you read the term "designated profile" in Claim 1? A: <u>No</u>. Those definitions I just talked about are frequently seen during research or measurement. In other words, you need to do the research and measurement. You need to define it first. Just like if you run 100 meters on the running, then you need to have a starting point. Reply at 21; Ex. 1055, 15:17-16:7 Dr. Tsai PO's Expert DEMONSTRATIVE EXHIBIT – NOT EVIDENCE
34	Patent owner objects to this slide because it improperly relies on citations of Dr. Tsai's deposition testimony that were used in Peitioners' Reply to discuss the "designated profile" of the Tsai reference for a new and different purpose, to refute Patent Owner's contention that Sung '817 provides written description support for claim 1 of the '802 patent. 3. '817 Application Fails to Provide Support For [1E] & [1F] During cross, Dr. Tsai testified designated profile refers to either (1) the highest protruding tip or (2) the substrate EX1048  '802 Patent's "designated profile" Q: When you read the '802 patent Claim 1, the word '<u>designated profile</u>,' you were thinking <u>either the substrate or the highest protruding tip</u>, is that right? A: Yes. Dr. Tsai PO's Expert Reply at 19-20; Ex. 1048; Ex. 1055, 14:11-16 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE
35	Patent owner objects to this slide because it improperly relies on citations of Dr. Tsai's deposition testimony that were used in Peitioners' Reply to discuss the "designated profile" of the Tsai reference for a new and different purpose, to refute Patent Owner's

contention that Sung '817 provides written description support for claim 1 of the '802 patent.

3. '817 Application Fails to Provide Support For [1E] & [1F]

- '802 Patent's "designated profile" is only the "highest protruding tip" comes from Dr. Tsai's *re-direct* testimony

The diagram, labeled EX2014, shows a hand-drawn profile of a series of rounded shapes. A red line traces the top edge. A red circle highlights a point on this line, with a handwritten label 'Designated' next to it. A red arrow points from the text ''802 Patent's designated profile' to this circled point. Other handwritten labels include 'highest', 'designated', 'designated', and 'designated'. A red 'X' is drawn over a handwritten label 'Exhibit 1004'.

Q: Can you please clarify for the record which one is the accurate reflection of what you believe to be the designated profile for the '802 patents and Exhibit 1004?
A: This [Exhibit 1014] here...

Dr. Tsai
PO's Expert

Reply at 22-23; Ex. 2014; Ex. 1055, 15613-19

DEMONSTRATIVE EXHIBIT - NOT EVIDENCE

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Dated: June 16, 2025

/ Alex Chan /

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on June 16, 2025, the foregoing document is being served via electronic mail upon the following counsel of record for Petitioner:

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