UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE PATENT TRIAL AND APPEAL BOARD REACTIVE SURFACES LTD. LLP, Petitioner, v. TOYOTA MOTOR CORPORATION, Patent Owner.

Case IPR2016-01914

Patent No. 8,394,618 B2

PATENT OWNER'S MOTION FOR OBSERVATIONS ON CROSS-**EXAMINATION**

Patent Owner Toyota Motor Corporation submits the following observations on the cross-examination of Dr. David Rozzell and Mr. Eric Ray, reply declarants of Petitioner Reactive Surfaces Ltd. LLP.¹ The transcripts of Dr. Rozzell's and Mr. Ray's testimony have been filed as Exhibits 2017 and 2018, respectively.

I. Observations on the Cross-Examination of Dr. Rozzell

- A. Observations Relevant to Whether Buchanan (Exhibit 2013) Is Non-Analogous Art (PO Resp. 27-35).
- 1. In Exhibit 2017, at 9:24-10:5, when asked whether, in defining the "field of endeavor" of the '618 patent as "enzyme-containing polymeric coatings capable of facilitating the removal of fingerprints and other bioorganic stains *by vaporization*," *see* Ex. 1018 ¶ 37 (emphasis added), he had defined the "field of endeavor" in terms of the inventors' own invention, Dr. Rozzell admits that he "defined it based on what [he] thought was the focus of the[ir] work, which was the removal or facilitating the removal of fingerprints by vaporization." This admission is relevant to the parties' disagreement regarding the proper definition of the '618 patent's "field of endeavor." *See* PO Resp. 28-30 (defining the relevant

¹ Patent Owner has been authorized to file a sur-reply on certain issues. *See* Paper 53. To the extent that Dr. Rozzell and Mr. Ray testified on issues that Patent Owner expects to address in the sur-reply, such testimony will be discussed in that later filing rather than this paper.



"field of endeavor" broadly as "bioactive coatings"). The admission is relevant because it highlights the hindsight nature of Dr. Rozzell's definition.

- 2. In Exhibit 2017, at 13:7-16, Dr. Rozzell admits that he has no experience with "[r]emoving stains by vaporization." Similarly, at 26:7-11, Dr. Rozzell admits that he has no experience with "methods for facilitating the removal of fingerprints by vaporization." This admission is relevant to the definition of the "field of endeavor." *See* PO Resp. 28-30; Ex. 1018 ¶ 37. The admission is relevant because it highlights the fact that Dr. Rozzell himself lacks any experience or expertise in the relevant "field of endeavor" as he has defined it.
- 3. In Exhibit 2017, at 13:20-14:1, when asked whether Buchanan "ha[s] anything to do with enzymes or enzymes[-]containing polymeric coatings," Dr. Rozzell admits: "No." Further, at 14:2-14:7, when asked whether Buchanan therefore falls outside the relevant "field of endeavor" as defined in Dr. Rozzell's reply declaration, Dr. Rozzell admits that Buchanan "doesn't include enzymes in looking at the removal of fingerprints by vaporization." These admissions are relevant to Patent Owner's argument that Buchanan is not from the same "field of endeavor" as the '618 patent. *See* PO Resp. 28-30. The admissions are relevant because they demonstrate that Buchanan falls outside the relevant "field of endeavor" even under Dr. Rozzell's definition.
 - 4. In Exhibit 2017, at 16:20-17:11, Dr. Rozzell admits that the problem



addressed in the '618 patent is "the removal of fingerprints." Further, at 16:17-19, when asked whether "there any other ways of removing bioorganic stains besides vaporization," Dr. Rozzell responds: "Of course." This admission is relevant to Patent Owner's argument that Buchanan is not "reasonably pertinent to the particular problem with which the inventor [was] involved." *See* PO Resp. 30-35. The admission is relevant because it supports Patent Owner's position that "Petitioner's reliance on Buchanan for its alleged teaching that fingerprints can vaporize reveals improper hindsight . . . because it amounts to [d]efining the problem in terms of its solution." *See ibid.* 35. (internal citation and quotation marks omitted).

- B. Observations Relevant to Whether Buchanan Provides a Suggestion or Reasonable Expectation That Associating a Lipase With a Surface Would Facilitate the Removal of Fingerprint Stains From the Surface via Vaporization (PO Resp. 35-49).
- 1. In Exhibit 2017, at 28:12-29:12, when asked whether the breakdown products obtained from lipase-catalyzed hydrolysis of lipids would necessarily vaporize at ambient conditions, Dr. Rozzell admits that this "would depend on what the breakdown products were . . . what the substrate for the lipase was going to be." This admission is relevant to Patent Owner's argument that a POSITA would not have reasonably expected that the association of a lipase with a substrate would promote the removal of fingerprints stains from the substrate via vaporization. *See* PO Resp. 36-37. The admission is relevant because it



undermines Dr. Rozzell's testimony that the use of lipase to break down the lipid components of a fingerprint stain into smaller compounds would have been expected to facilitate the removal of the fingerprint stain. See Ex. $1018 \, \P \, 54$; see also Ex. $1010 \, \P \, 41$.

- 2. In Exhibit 2017, at 31:8-32:19, Dr. Rozzell admits that Ramotowski (Exhibit 1024) makes a distinction between "sweat samples" and "latent print residue[]" samples. At 32:20-22, Dr. Rozzell admits that Ramotowski is a reputable source. These admissions are relevant to Dr. Dordick's and Patent Owner's position that the data presented in Buchanan would not reasonably support an expectation that fingerprints can be removed through vaporization, one reason being that, instead of analyzing the chemical composition of actual fingerprint residue deposited on a surface, the authors analyzed "sweat samples" extracted from the subjects' fingertips with rubbing alcohol (70% isopropanol in water). See Ex. 2010 ¶¶ 37, 67-68; PO Resp. 41-43. These admissions are relevant because they refute the testimony in Dr. Rozzell's reply declaration that the distinction made by Dr. Dordick between "sweat samples" and actual fingerprint residue is "inaccurate and misleading." See Ex. 1018 ¶ 59.
- 3. In Exhibit 2017, at 34:12-35:1, Dr. Rozzell admits that isopropanol might extract lipid compounds than would not be found in fingerprint residue.

 This admission is relevant to the same argument as discussed above in Paragraph



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