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**THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

WILUS INSTITUTE OF STANDARDS AND TECHNOLOGY INC., Plaintiff, v. HP INC. Defendant.	Civil Case No. 2:24-cv-00752-JRG [Lead Case] JURY TRIAL DEMANDED
WILUS INSTITUTE OF STANDARDS AND TECHNOLOGY INC., Plaintiff, v. SAMSUNG ELECTRONICS CO., LTD., SAMSUNG ELECTRONICS AMERICA, INC. Defendants.	Civil Case No. 2:24-cv-00746-JRG [Member Case] JURY TRIAL DEMANDED
WILUS INSTITUTE OF STANDARDS AND TECHNOLOGY INC., Plaintiff, v. SAMSUNG ELECTRONICS CO., LTD., SAMSUNG ELECTRONICS AMERICA, INC. Defendants.	Civil Case No. 2:24-cv-00765-JRG [Member Case] JURY TRIAL DEMANDED

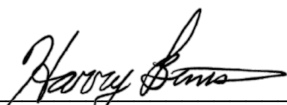
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WILUS INSTITUTE OF STANDARDS AND TECHNOLOGY INC., Plaintiff, v. ASKEY COMPUTER CORP., ASKEY INTERNATIONAL CORP. Defendants.	Civil Case No. 2:24-cv-00766-JRG [Member Case] JURY TRIAL DEMANDED
WILUS INSTITUTE OF STANDARDS AND TECHNOLOGY INC., Plaintiff, v. ASKEY COMPUTER CORP., ASKEY INTERNATIONAL CORP. Defendants.	Civil Case No. 2:24-cv-00753-JRG-RSP [Member Case] JURY TRIAL DEMANDED

OPENING REPORT OF DR. HARRY BIMS (CORRECTED)

I state under penalty of perjury under the laws of the United States of America that, to the best of my knowledge, the following is true and correct.

Date: January 28, 2026



Harry Bims Ph.D.

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I. INTRODUCTION

1. My name is Harry Bims. I have prepared this Report as an expert witness on behalf of Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (collectively, “Samsung”). In this Report, I provide my opinions as to whether certain claims of: U.S. Patent 10,313,077 (“the ’077 patent”); U.S. Patent 10,687,281 (“the ’281 patent”); U.S. Patent 11,470,595 (“the ’595 patent”); and U.S. Patent 11,159,210 (“the ’210 patent”) (collectively, the “Asserted Patents” or “Patents-in-Suit” or “’746 Asserted Patents”) are valid.¹ Specifically, I understand that Wilus Institute of Standards and Technology, Inc. (“Wilus”) alleges that Samsung infringes the following claims (collectively, the “Asserted Claims”):

Asserted U.S. Patents	Asserted Claims
10,313,077	1, 3-5, 8
10,687,281	1-4, 6
11,470,595	1-5
11,159,210	1-5

2. It is my opinion, among other things, that each of the Asserted Claims is invalid. I provide technical bases for these opinions as appropriate.

3. I understand that in a separate pending litigation, Civil Case No. 2:24-cv-00765-JRG (“’765 litigation”), consolidated with the ’746 case, Wilus has asserted U.S. Patents 11,129,163 (the “’163 patent”); 11,700,597 (the “’597 patent”); 11,116,035 (the “’035 patent”); and 11,516,879 (the “’879 patent”) (collectively, the “’765 Asserted Patents”) against Samsung. In this Report, I also provide my opinions on the technical comparability of the ’746 Asserted Patents and the ’765 Asserted Patents.

¹ I understand that the Asserted Patents against Samsung are part of Civil Case No. 2:24-cv-00746-JRG (“’746 litigation”).

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4. This Report incorporates by reference the declaration I submitted on December 22, 2025 (“Bims Declaration”).

5. This Report contains statements of my opinions formed to date and the bases and reasons for those opinions. I may offer additional opinions based on further review of materials in the case, including opinions and/or testimony of other expert witnesses.

6. In forming my opinions, I have relied on my knowledge and experience as a person of skill in the art and on the documents and information described below. I may also review other materials throughout this case, including any other documents or testimony that may emerge in this case. Those materials may affect my opinion in this matter.

7. I reserve the right to modify and supplement my analysis and conclusions set forth in this Report, within the guidelines of the Court, based upon any additional fact discovery performed by the parties or in response to any reports by Wilus’s experts. I also reserve the right to modify and supplement my analysis and conclusions set forth in this Report based upon any change to any of the applicable legal standards explained to me by Samsung’s counsel.

8. At trial, I may rely on visual aids and/or analogies concerning elements of the Patents-in-Suit or other aspects of my opinions or the material in this Report. In connection with my anticipated testimony in this case, I may use as exhibits of various documents produced in this case that refer or relate to the matters discussed in this Report. I have not yet selected the particular exhibits that might be used. In addition, I may create or assist in the creation of certain demonstrative evidence to assist me in testifying.

3. Additional Alternatives

1258. Acceptable alternative designs include earlier versions of Wi-Fi, including systems compliant with Wi-Fi Alliance’s Wi-Fi 5 certification and/or systems implementing certain features of IEEE 802.11ac without implementing features of IEEE 802.11ax.

1259. To the extent the prior art references asserted against this patent in Samsung’s invalidity contentions are not found to be invalidating, then these references would offer acceptable alternative designs. In particular, the alleged invention from U.S. Pat. No. 10,219,271 (Hedayat) (PRIOR_ART_00011881 – PRIOR_ART_00011932), U.S. App. No. 2016/0330058 (Chen) (PRIOR_ART_00014185 – PRIOR_ART_00014231), and U.S. App. No. 2017/0041929 (Noh) (PRIOR_ART_00014986 – PRIOR_ART_00015037). All three of Hedayat, Chen, and Noh and the ’595 patent are drawn to the same field of technology, i.e., channel allocation. During prosecution, the applicants argued that Hedayat, Chen, and Noh disclosed methods for channel allocation that are distinct from the ’595 patent. At least the methods and systems disclosed by Hedayat, Chen, and Noh are alternative designs for the ’595 patent claims.

1260. The alternate designs would have had no impact or minimal impact on the performance of a system using 802.11ax. The asserted claims provide little benefit and therefore using the above alternative designs would have had very small impact on performance. Additionally, the work needed to implement these alternate designs are minimal and can be achieved updating the software on the device.

D. Alternatives to the ’210 Patent

1261. Each of the design alternatives discussed below was a commercially acceptable and available alternative or substitute to the accused functionality in the accused products as of October 26, 2021 (the issue date of the ’210 patent).

1262. Acceptable design alternatives include earlier versions of Wi-Fi, including systems compliant with Wi-Fi Alliance Wi-Fi 5 certification as well as systems implementing certain features of 802.11ac without implementing certain features of 802.11ax. Some examples of such systems are: HP Spectre 13 (2013 Model), HP Envy 17 (2014 Model), Samsung Galaxy S4 Smartphone, Samsung Galaxy Note 3 Smartphone, Samsung Galaxy Tab Pro, Samsung Galaxy Tab S, Samsung ATIV Book 9 (2014 Edition), Samsung ATIV Book 9 (2015 Edition).

1. Alternatives That Do Not Use HE MU PPDU For Any SU MIMO Transmissions

1263. Acceptable alternative designs include systems that use HE MU PPDU transmissions for the multiple user case and use HE SU PPDU transmissions for the single user case. These scenarios were already described in IEEE 802.11ax_D1.0 (as discussed above) as well as earlier draft versions such as IEEE 802.11ax/D0.5 (also as discussed above). *See generally* IEEE 802.11ax/D0.5 (PRIOR_ART_00059232), IEEE 802.11ax_D1.0 (PRIOR_ART_00007489).

2. Additional Alternatives

1264. To the extent the following prior art references asserted against this patent in Samsung’s invalidity contentions are not found to be invalidating, then these references would offer acceptable alternative designs. *See, e.g.*, US 2017/0181136 (“Bharadwaj 136”); US 2018/0176066 (“Lim 066”); “IEEE P802.11ax/D1.0 Enhancements for High Efficiency WLAN,” (“IEEE P802.11ax/D1.0”); IEEE 802.11-15/0132r15 “Wireless LANs Specification Framework for TGax” (“IEEE 802.11-15/0132r15”); IEEE 802.11ac; US 2017/0366310 (“Verma 310”); US 2016/0285526 (“Hedayat 526”); US 2017/0064718; IEEE 802.11-2012; IEEE 802.11-2016; *see also* 02-13-2025 Defendants’ P.R. 3-3 and 3-4 Invalidity Contentions and Subject Matter Eligibility Contentions.

1265. To the extent that a draft version of IEEE 802.11ax such as IEEE 802.11ax_D0.5 or IEEE 802.11ax_D1.0 is deemed to not invalidate the claims of the ’210 patent, acceptable alternative designs include systems that in a HE MU PPDU transmission, include 1) a non-MU-MIMO allocation (as described by a draft version of IEEE 802.11ax) (with or without a common field) in the HE-SIG-B for the single user case, and 2) a MU-MIMO allocation (as described by a draft version of IEEE 802.11ax) (with or without a common field) in the HE-SIG-B for the multiple user case. *See generally* IEEE 802.11ax/D0.5 (PRIOR_ART_00059232), IEEE 802.11ax_D1.0 (PRIOR_ART_00007489).

1266. The alternate designs would have had no impact or minimal impact on the performance of a system using 802.11ax. The asserted claims provide little benefit and therefore using the above alternative designs would have had very small impact on performance. Additionally, the work needed to implement these alternate designs are minimal and can be achieved updating the software on the device.

XIX. OTHER OPINIONS REGARDING ASSERTED PATENTS AND RELEVANT TECHNOLOGY

A. Accused Products & Functionality

1267. For both the ’746 litigation and ’765 litigation, I understood that the accused products are Samsung’s “Wi-Fi 6 (802.11ax) enabled devices, including mobile phones, tablets, laptops, e-readers, cameras, appliances, and wearables, used, offered for sale, sold, and/or imported by [Samsung] in the United States.” *See* Complaint for Patent Infringement, Case No. 2:24-cv-00746, p. 5; Complaint for Patent Infringement, Case No. 2:24-cv-00765, p. 5. *See also* Preliminary Disclosure of Asserted Claims and Infringement Contentions for 2:24-cv-00746-JRG (“’746 Infringement Contentions”) and 2:24-cv-00765-JRG (“’765 Infringement Contentions”) (collectively, “Infringement Contentions”).