UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BOE TECHNOLOGY GROUP CO., LTD.

Petitioner

v.

138 EAST LCD ADVANCEMENTS LIMITED,

Patent Owner.

PTAB Case No. IPR 2025-01396

Patent No. 7,636,146

DECLARATION OF YUANYUAN LIU IN SUPPORT OF PETITIONER'S OPPOSITION TO PATENT OWNER'S REQUEST FOR DISCRETIONARY DENIAL

I, Yuanyuan Liu, declare as follows:

1. I am an IP Counsel at Petitioner BOE Technology Group Co., Ltd. ("BOE"). I submit this declaration in support of BOE's opposition to Patent Owner's ("138 East") request for discretionary denial. I am over 18 years of age. I have personal knowledge of the facts stated herein and could testify competently to them if asked to do so.

2. Seiko Epson ("Seiko") decided to leave the LCD display market.[1] Seiko later sold to BOE a substantial number of patents. The patents that BOE purchased from Seiko did not include U.S. Patent No. 7,636,146 ("the '146 patent") or certain other Seiko patents relating to LCD display technology.

3. During the negotiation, Seiko proposed adding to the deal a royalty-free cross-licensing arrangement that would provide BOE with a royalty-free license to additional Seiko patents in exchange for BOE providing Seiko a royalty-free license to certain of BOE's patents. BOE found this acceptable because there would be essentially no cost to BOE. BOE did not need to look into the large

[1] *See, e.g.*, https://www.sonyinsider.com/2009/07/06/epson-gives-its-small-and-medium-sized-lcd-operations-to-sony-for-free/?amp=1 ("Epson Gives its Small and Medium-Sized LCD Operations to Sony for Free.").

portfolio of patents Seiko cross-licensed. BOE believed at the time that BOE was foregoing little to none substantial royalties in cross-licensing its patents to Seiko anyways, given that Seiko was leaving the LCD display business. Thus, BOE did not need to investigate into the large portfolio of patents Seiko cross-licensed to BOE to determine that Seiko must have believed that the value of its cross-licensed patents was low—otherwise, Seiko would not have exchanged the license to its portfolio for something of little to none value.

4. Therefore, on November 18, 2014, BOE and Seiko entered into a royalty-free cross licensing agreement. (*See* Ex. 2006 at ¶12.) As a result, BOE had a royalty-free license under Seiko's '146 patent and other Seiko patents from 2014 (when the cross-license agreement was executed) until 2019 (when the cross-license agreement expired).

5. Unknown to BOE at the time, 138 East purchased the '146 patent and other patents from Seiko some time before the cross-license agreement expired. (*See* Ex. 2006 at ¶¶12-25; *see also* https://ipvalue.com/news/ipvalue-management-affiliate-acquires-additional-portfolio-from-seiko-epson (IPValue Management press release announcing that its affiliate 138 East had acquired "over 2,500 worldwide patents . . . from Epson in multiple transactions since April 2018.").)

6. Then, shortly after BOE's license expired, 138 East sent a letter to BOE on January 2, 2020, alleging infringement of eight Seiko patents that were

previously cross-licensed, including the ’146 patent. This was the first time BOE had heard of the ’146 patent specifically, as the cross-license did not list specific patent numbers. This was followed by additional correspondence and infringement allegations, culminating in a demand by 138 East for a large payment from BOE.

7. Over the course of several meetings and exchanges of information, BOE provided proof to 138 East that BOE’s LCD displays do not infringe the asserted claims of the ’146 patent. For example, in BOE’s January 21, 2021 response to 138 East’s allegations, BOE informed 138 East that in BOE’s LCD products, the clock-signal input terminals have the same width, size, and area as the image-signal input terminals and that the alleged “terminals” identified by 138 East in its infringement contentions are not, in fact, terminals. Then in November of 2022, BOE provided excerpts of its confidential circuit designs, proving that the portions that 138 East called “terminals” are not terminals, and that every actual terminal in BOE’s products have exactly the same shape and area—the clock input terminals therefore do not have a “larger area” than the image signal input terminals as required in the asserted claim of the ’146 patent.

8. I declare under penalty of perjury of the laws of the United States of America that the foregoing is true and correct.

Executed on November 19, 2025 at Beijing, China.

Yuanyuan Liu