

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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BOE TECHNOLOGY GROUP CO., LTD.,  
Petitioner,

v.

SAMSUNG DISPLAY CO., LTD.,  
Patent Owner.

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Case IPR2025-01478  
U.S. Patent No. 11,574,990

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**PATENT OWNER'S REQUEST FOR  
DISCRETIONARY DENIAL OF INSTITUTION**

## TABLE OF CONTENTS

|      |                                                                                                                    |    |
|------|--------------------------------------------------------------------------------------------------------------------|----|
| I.   | Introduction.....                                                                                                  | 1  |
| II.  | BOE Delayed Filing This IPR For Years, Settling Expectations That<br>BOE Would Not Challenge The '990 Patent. .... | 3  |
| III. | The Co-pending Litigation's Early Trial Date Supports Denial. ....                                                 | 9  |
| IV.  | Conclusion .....                                                                                                   | 11 |

## TABLE OF AUTHORITIES

| Cases                                                                                                                                      | Page(s) |
|--------------------------------------------------------------------------------------------------------------------------------------------|---------|
| <i>Amazon.com, Inc. v. Audio Pod IP, LLC</i> ,<br>IPR2025-00757, Paper 15 (PTAB Aug. 14, 2025).....                                        | 6       |
| <i>Amgen Inc. v. Bristol-Myers Squibb Co.</i> ,<br>IPR2025-00601, Paper 9 (PTAB July 24, 2025) .....                                       | 7       |
| <i>Aquestive Therapeutics, Inc. v. Iono Pharma, LLC</i> ,<br>IPR2025-00874, Paper 11 (PTAB Oct. 3, 2025).....                              | 8       |
| <i>Belden Inc. v. CommScope, Inc. of N.C.</i> ,<br>IPR2025-00833, Paper 13 (PTAB Sept. 12, 2025).....                                      | 8       |
| <i>Dabico Airport Sols., Inc. v. AXA Power APS</i> ,<br>IPR2025-00408, Paper 21 (PTAB June 18, 2025) .....                                 | 6, 8    |
| <i>FlatFrog Laboratories AB v. Chemtronics Co.</i> ,<br>No. 2:23-cv-00306, 2024 WL 3014621 (E.D. Tex. June 14, 2024).....                  | 10      |
| <i>Force Mos Tech., Co. v. ASUSTek Comput., Inc.</i> ,<br>No. 2:22-cv-00460, 2024 WL 1586266 (E.D. Tex. Apr. 11, 2024).....                | 10      |
| <i>iRhythm Techs., Inc. v. Welch Allyn, Inc.</i> ,<br>IPR2025-00363, -00374, -00376, -00377, -00378, Paper 10<br>(PTAB June 6, 2025) ..... | 8       |
| <i>Motorola Sols., Inc. v. Stellar, LLC</i> ,<br>IPR2024-01205 et al., Paper 19 (Director Mar. 28, 2025) .....                             | 11      |
| <i>Nissan Motor Co. v. Longhorn Automotive Group LLC</i> ,<br>IPR2025-01089, Paper 10 (Director Oct. 17, 2025).....                        | 10      |
| <i>Peloton Interactive, Inc. v. Flywheel Sports, Inc.</i> ,<br>No. 2:18-cv-00390, 2019 WL 3826051 (E.D. Tex. Aug. 14, 2019) .....          | 10      |
| <i>Samsung Elecs. Co. v. iCashe, Inc.</i> ,<br>IPR2025-00639, Paper 11 (PTAB Aug. 14, 2025).....                                           | 7       |

|                                                                                                                |    |
|----------------------------------------------------------------------------------------------------------------|----|
| <i>Shenzhen Tuozhu Tech. Co. v. Stratasy, Inc.</i> ,<br>IPR2025-00354, Paper 11 (Director June 12, 2015) ..... | 11 |
|----------------------------------------------------------------------------------------------------------------|----|

|                                                                                                                                          |   |
|------------------------------------------------------------------------------------------------------------------------------------------|---|
| <i>Yangtze Memory Techs. Co. v. Micron Tech., Inc.</i> ,<br>IPR2025-00498, -00499, -00500, -00501, Paper 11<br>(PTAB Aug. 14, 2025)..... | 6 |
|------------------------------------------------------------------------------------------------------------------------------------------|---|

## **Statutes**

|                       |    |
|-----------------------|----|
| 35 U.S.C. § 102 ..... | 11 |
|-----------------------|----|

|                       |    |
|-----------------------|----|
| 35 U.S.C. § 103 ..... | 11 |
|-----------------------|----|

## **Other Authorities**

|                                                                                                                                        |    |
|----------------------------------------------------------------------------------------------------------------------------------------|----|
| <i>Revision of Rules of Practice for Trials before the Patent Trial and Appeal Board</i> ,<br>90 Fed. Reg. 48,335 (Oct. 17, 2025)..... | 11 |
|----------------------------------------------------------------------------------------------------------------------------------------|----|

## LIST OF EXHIBITS

| <b>Exhibit</b> | <b>Description</b>                                                                                                                                   |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2001           | Docket Control Order, <i>Samsung Display Co., Ltd. v. BOE Technology Group Co.</i> , No. 2:25-CV-00412-JRG-RSP (E.D. Tex. Oct. 8, 2025), Dkt. No. 55 |
| 2002           | Samsung Display – Patents                                                                                                                            |
| 2003           | Time-to-trial statistics – Judge Rodney Gilstrap                                                                                                     |
| 2004           | Time-to-trial statistics – Eastern District of Texas                                                                                                 |

## **I. Introduction**

Patent Owner Samsung Display Co., Ltd. (“Samsung Display”) respectfully requests that the Office exercise discretion to deny institution of BOE Technology Group Co. Ltd.’s (“BOE’s”) Petition for *inter partes* review of U.S. Patent No. 11,574,990 (the ’990 Patent).

Samsung Display has settled expectations in the validity of the ’990 Patent that should not be disturbed. This petition is one of a dozen IPR petitions filed by BOE on behalf of itself and a large group of related Chinese entities.<sup>1</sup> BOE began to

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<sup>1</sup> The petition identifies Petitioner BOE Technology Group Co., Ltd., along with the following real parties in interest:

1. Mianyang BOE Optoelectronics Technology Co., Ltd.,
2. Ordos Yuansheng Optoelectronics Co., Ltd.,
3. Chengdu BOE Optoelectronics Technology Co., Ltd.,
4. Chongqing BOE Optoelectronics Technology Co., Ltd.,
5. Wuhan BOE Optoelectronics Technology Co., Ltd.,
6. Yunnan Invensight Optoelectronics Technology Co., Ltd. f/k/a BMOT  
f/k/a Kunming BOE Display Technology, and
7. BOE Technology America, Inc.

Pet. at 110.

file these petitions just four days after BOE and other Chinese manufacturers of OLED displays<sup>2</sup> lost their joint challenges to Samsung Display's patents in six IPRs. BOE chose not to challenge the '990 Patent or the other eleven patents at the time, even though they all had been issued before BOE filed its first IPR petition back in 2023 and Samsung Display had specifically notified BOE of its infringement of some of those patents, related patents, and other patents directed to the same fields of OLED technology back in 2022. Further, many of the now-challenged patents have been in force for more than six years and even up to 18 years. Samsung Display invested heavily in obtaining its patents, including the '990 Patent, and relied on those patents' validity when investing hundreds of millions of dollars in its OLED technology and becoming the market leader. BOE has known about Samsung Display's patent portfolio for years and has already been found to have infringed on and misappropriated Samsung Display's valuable OLED technology.

Institution of an IPR here is not warranted for additional reasons. It would risk the potential for inconsistent results and duplication of effort in parallel proceedings,

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<sup>2</sup> Petitioners in these IPRs were Mianyang BOE Optoelectronics Technology Co., Ltd., Wuhan China Star Optoelectronics Semiconductor Display Technology Co., Ltd., Tianma Microelectronics Co. Ltd., and Visionox Technology, Inc.

as the district court trial has been scheduled and is likely to occur before the expected due date for a final written decision in this IPR. This IPR should be denied.

## **II. BOE Delayed Filing This IPR For Years, Settling Expectations That BOE Would Not Challenge The '990 Patent.**

In May 2022—more than three years before BOE filed its petition—Samsung Display notified BOE by letter that BOE was engaging in widespread infringement of Samsung Display's patents covering OLED display technologies, including several parent patents in the same family as the challenged '990 Patent. Yet despite receiving that letter, BOE did not cease its infringing activities.

Samsung Display subsequently filed two complaints at the U.S. International Trade Commission to address the widespread infringement of its patents by OLED manufacturers including BOE, and to address BOE's misappropriation of Samsung Display's trade secrets concerning OLED displays. In the patent infringement case, the Administrative Law Judge found that BOE had infringed several of Samsung Display's OLED patents, and upheld the validity of each of Samsung Display's asserted patents. *See Certain Active Matrix Organic Light-Emitting Diode Display Panels and Modules for Mobile Devices, and Components Thereof*, Inv. No. 337-TA-1351, Initial Determ. (Public Version), EDIS Doc. ID 838816, at 182–83 (Nov. 15, 2024). And in the trade secret misappropriation case, the Administrative Law Judge found that BOE had misappropriated seven categories of Samsung Display trade secrets concerning OLED displays. *See Certain Organic Light-Emitting Diode*

*Display Modules and Components Thereof*, Inv. No. 337-TA-1378, Initial Determ. (Public Version), EDIS Doc. ID 859309, at 8–9, 441–43 (July 11, 2025).

Despite the ITC’s finding that BOE infringed several of Samsung Display’s OLED patents, BOE’s infringement continued. Samsung Display thus filed complaints in the Eastern District of Texas asserting additional OLED patents, including those that were specifically identified in the prior notice letter, those that were related to the patents identified in the notice letter (including the ’990 Patent), and those that were directed to the same technical fields as those specifically identified in the notice letter. *See Samsung Display Co. v. BOE Tech. Grp. Co. et al.*, No. 2:25-cv-412 (E.D. Tex.); *Samsung Display Co. v. BOE Tech. Grp. Co. et al.*, No. 2:25-cv-426 (E.D. Tex.); *Samsung Display Co. v. BOE Tech. Grp. Co. et al.*, No. 2:25-cv-430 (E.D. Tex.).

In response to Samsung Display’s ITC complaints, starting in June of 2023, BOE filed four IPR petitions challenging Samsung Display’s patents that were asserted in the ITC action, all of which resulted in final written decisions confirming at least one challenged claim as patentable. *See generally* IPR2023-00941, Paper 70 at 55 (determining no challenged claim is unpatentable); IPR2023-00987, Paper 46 at 122 (determining challenged claim BOE infringes is not unpatentable); IPR2023-00988, Paper 44 at 101 (determining challenged claim BOE infringes is not unpatentable); IPR2023-01075, Paper 46 at 33 (determining no challenged claim is

unpatentable). BOE subsequently filed and then withdrew another IPR petition challenging another Samsung Display patent. *See* IPR2023-01221, Paper 10 at 2 (granting BOE’s motion to terminate where “Petitioner wishes to terminate this *Inter Partes* Review before the IPR Proceeding is instituted. Patent Owner does not oppose.”) (quoting Paper 9 at 1). BOE then filed a second petition challenging the same patent, resulting in an IPR in which 12 of 18 challenged claims were confirmed as patentable in a final written decision. *See* IPR2024-00620, Paper 41 at 91. The PTAB issued the last of these decisions on August 25, 2025. *See* IPR2024-00620, Paper 41 at 1.

Just four days later, BOE began filing a series of additional IPR petitions challenging the validity of more of Samsung Display’s OLED patents. Within a month of the last of the final written decisions from BOE’s prior round of failed challenges, BOE filed 12 IPR petitions challenging 12 additional Samsung Display patents that were asserted against BOE in district court. *See* IPR2025-01476, Paper 2; IPR2025-01477, Paper 2; IPR2025-01478, Paper 2; IPR2025-01479, Paper 2; IPR2025-01480, Paper 2; IPR2025-01481, Paper 2; IPR2025-01494, Paper 2; IPR2025-01498, Paper 2; IPR2025-01499, Paper 2; IPR2025-01544, Paper 2; IPR2025-01545, Paper 2; IPR2025-01557, Paper 2.

BOE did not explain why it had waited two and one-half years to challenge these patents, rather than challenging them along with the other Samsung Display

patents, even though they all (including the '990 Patent) had already issued when BOE filed its first set of petitions. Indeed, BOE has known about the parents of the challenged '990 Patent since at least May of 2022, when Samsung Display gave notice of BOE's infringement of those patents. Rather than lying in wait to see the results of its first round of IPR petitions, BOE should have challenged the '990 Patent years ago.

Further, the '990 Patent issued nearly three years ago, on February 7, 2023. Ex. 1001, cover. And along with the '990 Patent, BOE has asked the Board to consider patents that issued **18 years ago** (U.S. Patent No. 7,279,708), **nine years ago** (U.S. Patent No. 9,299,730), **seven years ago** (U.S. Patent No. 10,013,088), and **six years ago** (U.S. Patent Nos. 10,541,279 and 10,439,015), for which settled expectations have unquestionably attached. *See, e.g., Dabico Airport Sols., Inc. v. AXA Power APS*, IPR2025-00408, Paper 21 at 2–3 (PTAB June 18, 2025) (patent “in force [for] almost eight years”); *Yangtze Memory Techs. Co. v. Micron Tech., Inc.*, IPR2025-00498, -00499, -00500, -00501, Paper 11 at 2 (PTAB Aug. 14, 2025) (patents in force for six years). It would be an inefficient use of Board resources to consider a subset of the asserted patents when the district court proceedings would continue unabated. *See also Amazon.com, Inc. v. Audio Pod IP, LLC*, IPR2025-00757, Paper 15 at 3 (PTAB Aug. 14, 2025); *Samsung Elecs. Co. v. iCashe, Inc.*,

IPR2025-00639, Paper 11 at 3 (PTAB Aug. 14, 2025) (denying institution even though two subject patents had not been in force as long as the others).

Samsung Display’s expectations are particularly strong for two additional reasons. *First*, Samsung Display has invested significant time and effort to obtain a substantial patent portfolio protecting its OLED technology. *See* Ex. 2002. That, in turn, allows Samsung Display to confidently invest hundreds of millions of dollars in developing the underlying technology—including by investing directly into the United States, creating strong settled expectations in the ’990 Patent. *See, e.g.,* Inv. No. 337-TA-1378, Initial Determin. (Public Version), EDIS Doc. ID 859309, at 4–5 (observing that Samsung Display “has invested hundreds of millions of dollars into OLED R&D and into its protected OLED manufacturing processes,” including in “the sole source of OLED research and development in the United States”); *see also id.* at 322–44; *Amgen Inc. v. Bristol-Myers Squibb Co.*, IPR2025-00601, Paper 9 at 2 (PTAB July 24, 2025) (“[T]here may be good reasons why a patent owner has strong settled expectations in a patent that has only been in force for three years, for example an explanation of how an extraordinary amount of investment, time, and resources dedicated to research [and] development ... correlates to settled expectations.”).

*Second*, BOE has known about Samsung Display’s patents for years. Samsung Display notified BOE of dozens of patents in its OLED patent portfolio in May 2022.

And, in addition to being BOE’s primary competitor in a niche market with few players, Samsung Display is a well-known market leader and innovator in the OLED space, having pioneered its research and development of OLEDs since 1997. *See, e.g.,* Inv. No. 337-TA-1378, Initial Determ. (Public Version), EDIS Doc. ID 859309, at 4 (“At the time SDC began its R&D into developing OLEDs, there appears to have been only one other player in the OLED marketplace”—BOE “moved into the OLED marketplace some 16 years after SDC.”). Samsung Display also publicly marks its technology with its patents. *See* Ex. 2002.

BOE’s knowledge further creates settled expectations for Samsung Display and supports denying institution. *See Aquestive Therapeutics, Inc. v. Iono Pharma, LLC*, IPR2025-00874, Paper 11 at 2 (PTAB Oct. 3, 2025) (denying institution when “Petitioner had notice of Patent Owner’s patent applications and the resulting patent for several years before filing its Petition”); *see also Dabico*, IPR2025-00408, Paper 21 at 3; *iRhythm Techs., Inc. v. Welch Allyn, Inc.*, IPR2025-00363, -00374, -00376, -00377, -00378, Paper 10 at 3 (PTAB June 6, 2025) (denying institution because “Petitioner’s awareness of Patent Owner’s applications and failure to seek early review of the patents favors denial”); *Belden Inc. v. CommScope, Inc. of N.C.*, IPR2025-00833, Paper 13 at 2 (PTAB Sept. 12, 2025) (“Patent Owner also provides evidence of patent marking of the commercialized product.”). Indeed, BOE specifically targeted Samsung Display’s innovative OLED technology to implement

in its OLED displays, engaging in widespread infringement of Samsung Display's technology and misappropriating Samsung Display's trade secrets, as discussed above.

Samsung Display has strong settled expectations in the validity of the OLED patents now challenged by BOE, including the '990 Patent. The patents have been in force for many years; BOE failed to challenge those patents despite having specific knowledge of the patents and of its own infringement of those patents for years prior to the filing of the instant IPR petition; and Samsung Display has invested a significant amount of time and resources dedicated to research and development of OLED technologies covered by the challenged patents.

### **III. The Co-pending Litigation's Early Trial Date Supports Denial.**

The Petition should be denied to avoid the potential for inconsistent results and duplication of effort in parallel proceedings. The district court has scheduled a trial on March 1, 2027, in an infringement proceeding Samsung Display filed involving the '990 Patent. Ex. 2001. That date is before the expected due date for a final written decision in this IPR. This trial date, which is scheduled for approximately 23 months after the complaint was filed, is consistent with the median time-to-trial statistics for patent cases for both Judge Gilstrap (22 months) and the U.S. District Court for the Eastern District of Texas generally (22.1 months). Ex. 2003; Ex. 2004. Moreover, "there is insufficient evidence that the district court is

likely to stay its proceeding even if the Board were to institute trial.” *Nissan Motor Co. v. Longhorn Automotive Group LLC*, IPR2025-01089, Paper 10 at 2 (Director Oct. 17, 2025). Here, as in *Nissan*, the district court has not granted a stay, and a stay is unlikely because the Eastern District of Texas and Judge Gilstrap in particular routinely deny requests to stay pending IPRs, *see, e.g., Force Mos Tech., Co. v. ASUSTek Comput., Inc.*, No. 2:22-cv-00460, 2024 WL 1586266, at \*4 (E.D. Tex. Apr. 11, 2024). Even when all claims are subject to IPR, the court will often deny a stay when the case involves direct competitors, as is the case here. *See, e.g., FlatFrog Laboratories AB v. Chemtronics Co.*, No. 2:23-cv-00306, 2024 WL 3014621, at \*3 (E.D. Tex. June 14, 2024) (“While the Court might otherwise be inclined to grant a stay where Final Written Decisions on all asserted claims are expected very close to trial, the parties being direct competitors relevant to the accused products changes the balancing of factors.”); *Peloton Interactive, Inc. v. Flywheel Sports, Inc.*, No. 2:18-cv-00390, 2019 WL 3826051, at \*3 (E.D. Tex. Aug. 14, 2019) (“[C]ourts within this district are generally reluctant to stay proceedings when the parties are direct competitors”) (citations omitted). Institution of this IPR therefore would be inefficient.

BOE’s stipulation to limit the invalidity grounds it will raise in the district court falls short. *See* Paper 6 at 1. First, BOE retains the right to combine system art with prior art documents that it reasonably could have raised in this IPR. *See id.* (iii).

Its stipulation also doesn't foreclose other challenges under 35 U.S.C. §§ 102 and 103, as the Office has proposed should be required of petitioners. *See Revision of Rules of Practice for Trials before the Patent Trial and Appeal Board*, 90 Fed. Reg. 48,335, 48,341 (Oct. 17, 2025) (NPRM). BOE's stipulation is therefore insufficient because it "does not ensure that these IPR proceedings would be a 'true alternative' to the district court proceeding." *Motorola Sols., Inc. v. Stellar, LLC*, IPR2024-01205 et al., Paper 19 at 3–4 (Director Mar. 28, 2025). Instead, it only "reduces, but does not eliminate, the inefficiencies" from maintaining two parallel proceedings, which supports discretionary denial. *Shenzhen Tuozhu Tech. Co. v. Stratasys, Inc.*, IPR2025-00354, Paper 11 at 3 (Director June 12, 2015).

#### **IV. Conclusion**

The Office should deny the Petition.

Date: November 10, 2025

Respectfully submitted,

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## **CERTIFICATE OF SERVICE**

Pursuant to 37 C.F.R. § 42.6, I hereby certify that the foregoing Patent Owner's Request for Discretionary Denial of Institution was served by electronic mail today on the following counsel of record for Patent Owner:

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