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

LONGITUDE LICENSING LIMITED, Plaintiff, v. BOE TECHNOLOGY GROUP CO., LTD., Defendant.	Civil Action No. 2:23-cv-00515-JRG-RSP

PLAINTIFF LONGITUDE LICENSING LIMITED'S P.R. 3-1
DISCLOSURE OF ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS

Pursuant to Patent Rule 3-1 and the Court's February 9, 2024 order (Dkt. 22), Plaintiff Longitude Licensing Limited ("Longitude") provides its Disclosure of Asserted Claims and Infringement Contentions ("Infringement Contentions") against Defendant BOE Technology Group Co., Ltd. ("BOE").

Longitude reserves the right to amend and/or supplement these Infringement Contentions pursuant to Patent Rule 3-6(a) in view of the Court's claim construction ruling(s). Longitude further reserves the right to seek leave pursuant to Patent Rule 3-6(b) to amend and/or supplement these Infringement Contentions, including identification of asserted claims, accused instrumentalities, and additional infringing structures within already-accused instrumentalities, based on information obtained through discovery and/or other means.

Longitude is providing these Infringement Contentions before it has received any discovery from BOE. Detailed information regarding BOE display panels and modules, the customers and affiliates to which BOE sells display panels and modules, and the products in which such panels and modules are incorporated is not publicly available. Longitude's

contentions are based on publicly available information. Longitude expects to obtain more detailed information through discovery.

I. Infringed Claims (P.R. 3-1(a))

Longitude asserts six patents: U.S. Patent Nos. 7,502,079 ("'079 patent"), 7,705,948 ("'948 patent"), 8,223,093 ("'093 patent"), 9,184,157 ("'157 patent"), 9,557,606 ("'606 patent"), and 10,181,462 ("'462 patent") (collectively, the "asserted patents"). Based on available information, Longitude identifies each claim of each patent-in-suit that BOE has infringed and continues to infringe:

Patent	Infringed Claims
'079 patent	2
'948 patent	1, 6
'093 patent	1, 4, 6, 9
'157 patent	4, 5, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18
'606 patent	7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 20
'462 patent	1, 2, 3, 5, 7

II. Accused Instrumentalities (P.R. 3-1(b))

Patent	Accused Instrumentalities	Infringed Claims
'079 patent	BOE LCD panels and modules including but not limited to part numbers MV270QUM-N20 (Ex. B1) and all substantially similar BOE LCD panels and modules, including those implemented in, for example, laptops, computer monitors, mobile phones, handheld and personal data assistant (PDA) devices, tablets, televisions, automotive displays, wearables, VR/AR head-mounted displays, and home appliances.[1]	2

[1] *See* Ex. A for a non-limiting listing of these and other devices incorporating BOE panels and modules, as compiled from publicly available information.

Patent	Accused Instrumentalities	Infringed Claims
’948 patent	BOE LCD panels and modules including but not limited to part numbers MV270QUM-N20 (Ex. C1), NV116WHM-T00 (Ex. C2), MV270FHB-N40 (Ex. C3), TV101WUM-NS1 (Ex. C4), and all substantially similar BOE LCD panels and modules, including those implemented in, for example, laptops, computer monitors, mobile phones, handheld and personal data assistant (PDA) devices, tablets, televisions, automotive displays, wearables, VR/AR head-mounted displays, and home appliances.	1, 6
’093 patent	BOE LCD panels and modules including but not limited to part number HV550QUB-F8D (Ex. D1) and all substantially similar BOE LCD panels and modules, including those implemented in, for example, laptops, computer monitors, mobile phones, handheld and personal data assistant (PDA) devices, tablets, televisions, automotive displays, wearables, VR/AR head-mounted displays, and home appliances.	1, 4, 6, 9
	BOE LCD panels and modules including but not limited to part number NV116WHM-T00 (Ex. D2) and all substantially similar BOE LCD panels and modules, including those implemented in, for example, laptops, computer monitors, mobile phones, handheld and personal data assistant (PDA) devices, tablets, televisions, automotive displays, wearables, VR/AR head-mounted displays, and home appliances.	1, 6, 9
’157 patent	BOE display panels and modules including but not limited to part numbers MT207FHM-N20 and MT207FHM-N10 (Ex. E1), MV270FHB-N40 (Ex. E2), HV550QUB-F8D (Ex. E3), HV650QUB-N9L (Ex. E4), MV270QHM-NF1 (Exs. E1-E4 are representative of this module), and all substantially similar BOE display panels	4, 5, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18

Patent	Accused Instrumentalities	Infringed Claims
	and modules, including those implemented in, for example, laptops, computer monitors, mobile phones, handheld and personal data assistant (PDA) devices, tablets, televisions, automotive displays, wearables, VR/AR head-mounted displays, and home appliances.	
'606 patent	BOE LCD panels and modules including but not limited to part numbers MT207FHM-N20 and MT207FHM-N10 (Ex. F1), NT156FHM-N61 (Ex. F2), and all substantially similar BOE LCD panels and modules, including those implemented in, for example, laptops, computer monitors, mobile phones, handheld and personal data assistant (PDA) devices, tablets, televisions, automotive displays, wearables, VR/AR head-mounted displays, and home appliances.	7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 20
'462 patent	BOE display panels and modules including but not limited to part numbers TV080WXM-NL1 and TV080WXM-NL0 (Ex. G2) and all substantially similar BOE display panels and modules, including those implemented in, for example, laptops, computer monitors, mobile phones, handheld and personal data assistant (PDA) devices, tablets, televisions, automotive displays, wearables, VR/AR head-mounted displays, and home appliances.	1, 2, 5, 7
	BOE display panels and modules including but not limited to part numbers MT207FHM-N20 and MT207FHM-N10 (Ex. G1), MV270FHM-N40 (Ex. G3), MV270QHM-NF1 (Ex. G4), HV650QUB-N9L (Ex. G5), HV550QUB-F8D (Exs. G1, G3, G4, and G5 are representative of this module), and all substantially similar BOE display panels and modules, including those implemented in, for example, laptops, computer monitors, mobile phones, handheld and personal data assistant (PDA) devices, tablets, televisions,	1, 2, 3, 5, 7

Patent	Accused Instrumentalities	Infringed Claims
	automotive displays, wearables, VR/AR head-mounted displays, and home appliances.	

In addition to the representative BOE part numbers that Longitude has identified as Accused Instrumentalities and addressed in claim charts, Longitude identifies additional BOE display panels and modules, by part number, based on current publicly available information. *See* Ex. A. On information and belief, many of these additional display panels and modules are also Accused Instrumentalities and infringe the asserted patents in a manner the same or substantially similar to the assertions in Longitude's claim charts. Longitude is without sufficient information at this time to determine which of the additional BOE display panels and modules in Exhibit A are not Accused Instrumentalities. In addition, Exhibit A is likely not a complete list of all BOE display panels and modules. Longitude may identify additional part numbers, and may accuse additional part numbers, as it obtains discovery.

Exhibit A identifies additional potentially infringing BOE display panels and modules by BOE part number, screen size (horizontal, in inches), display resolution (vertical, by horizontal number of pixels), display type (LCD, including IPS, VA, and TN subtypes, and OLED), product type (panel, module, module & touch assembly, and dual-display module), and application (category of end product for which the BOE panel or module is intended).

Longitude prepared Exhibit A using information from panelook.com, a website that lists display panels and modules available from various suppliers. Longitude relied on panelook.com to identify a list of potentially infringing BOE display panels and modules because BOE itself does not disclose publicly, via, for example, product catalogues or similar publications, the range of display panels and modules that it produces. Accordingly, the BOE display panels and modules identified in Exhibit A include all panels listed under the "BOE" panel brand on

panelook.com.[2] The part number, screen size, display type, product type, and application information for each BOE panel and module in Exhibit A correspond to, respectively, the following filters available on panelook.com: panel model, size, resolution, TN/VA/IPS, composition, and application. The range of applications, or categories of products for which each BOE panel or module is intended, comprise thirty-six unique categories, including, for example, Laptop, Mobile Phone, Desktop Monitor, TV Set, Pad & Tablet.

Longitude's infringement charts, attached here, correlate the asserted claims to Accused Instrumentalities. Those BOE panel and/or module part numbers are identified in Exhibit A under the "Infringement Contentions Exhibit" field, which identifies the BOE panel and/or module part numbers in Exhibit A that correspond to a Longitude infringement chart. Longitude expects to confirm, during discovery, infringing BOE panels and modules from (1) the BOE part numbers identified in Exhibit A for which Longitude has not yet served a corresponding infringement chart, and (2) additional BOE panels and modules not identified in Exhibit A, because Longitude has no way to locate that information from public data. Such additional BOE panels and modules not currently listed in Exhibit A may include, for example, part numbers that do not appear under the "BOE" brand on panelook.com; new products; products that BOE no longer sells (for which limited information is available); and any custom-made products that BOE produces for particular customers, that fall within the scope of Longitude's infringement contentions.

Furthermore, Longitude identifies in the table below a list of known manufacturers whose products incorporate BOE panels or modules, by end product category, as of approximately Q1

[2] *See* https://www.panelook.com/bramodlist.php?brands[]=19 (last accessed March 4, 2024).

2023. Discovery from BOE or other sources to which Longitude does not yet have access may reveal additional BOE customers not included in this list.

Product Category	BOE Customer
Mobile Phone[3]	Apple
	Google
	Honor
	Huawei
	Lenovo
	OPPO
	Samsung
	Transsion
	vivo
	Xiaomi
	ZTE
Automotive Display[4]	ADAYO
	Alpine
	Bosch
	BYD
	Continental AG
	Desay SV
	Faurecia Coagent
	HSAE
	Marelli
	Mobis
	Preh
	Valeo
	Visteon
	Yazaki
	YF Visteon
Monitor[5]	HP
	Samsung
	Lenovo
	LGE
Smartwatch[6]	Amazfit

[3] LLL0001205–1277.

[4] LLL0001205–1277.

[5] LLL0000619–687.

[6] LLL0001205–1277.

Product Category	BOE Customer
	Google
	OPPO
	Polar
	Samsung
	Xiaomi
Notebook Computer[7]	Acer
	Acer
	Apple
	ASUS
	Dell
	Dynabook
	HP
	Huawei
	Lenovo
	Samsung
Tablet[8]	Amazon
	Apple
	Lenovo
	Huawei
	Samsung
LCD TV[9]	Samsung
	LG
	Sony
	Panasonic
	TCL
	Hisense
	Skyworth
	Changhong
	Konka
	OEM - TPV
	Vestel

[7] LLL0001608–1702.

[8] LLL0001608–1702.

[9] LLL0001704–1764.

III. Charts Identifying Each Element of Each Asserted Claim within Accused Instrumentalities (P.R. 3-1(c))

Longitude contends that BOE has infringed and continues to infringe the asserted patents, directly and indirectly, by: (1) making, using, offering to sell, selling, and/or importing into the United States display panels and/or modules that practice the asserted patents' claims (35 U.S.C. § 271(a)); (2) inducing third parties (e.g., BOE customers or affiliates) to directly infringe by making, using, offering to sell, selling, and/or importing into the United States BOE display panels and/or modules that practice the asserted patents' claims, with knowledge of the asserted patents and of the third parties' direct infringement and specific intent to cause that direct infringement (35 U.S.C. § 271(b)); and (3) contributing to third parties' (e.g., BOE customers' or affiliates') direct infringement of the asserted patents by offering to sell, selling, and/or importing into the United States BOE display panels and/or modules constituting components of patented devices, which constitute a material part of the claimed inventions, with knowledge of the asserted patents and of the third parties' infringement (35 U.S.C. § 271(c)).

Longitude's claims under 35 U.S.C. § 271(b) and § 271(c) are based on direct infringement, under 35 U.S.C. § 271(a), by BOE's customers or affiliates making, using, offering to sell, or selling in the United States, or importing into the United States, products that contain BOE display panels and/or modules that practice the asserted patents' claims.

Attached as Exhibits B-G, Longitude provides charts identifying specifically where each element of each asserted claim is found within the Accused Instrumentalities. Longitude contends that the charted products provide representative infringement reads applicable to the broader set of Accused Instrumentalities, including substantially similar panels and other part numbers that Longitude may identify during discovery. Longitude reserves the right to provide additional support, based on information obtained during discovery, for its contention that the

charted products are representative, or to chart additional products as additional information becomes available.

Longitude does not contend that any element of any asserted claim is governed by pre-AIA 35 U.S.C. § 112(6).

IV. Literal Infringement and Infringement under the Doctrine of Equivalents (P.R. 3-1(d))

Longitude contends that each element of each asserted claim is literally present in each Accused Instrumentality. As provided in Longitude's charts (Exhibits B-G), Longitude contends, in the alternative, that certain elements of certain asserted claims are present under the doctrine of equivalents in the Accused Instrumentalities.

V. Priority Dates of the Asserted Claims (P.R. 3-1(e))

Longitude contends that the asserted patents are entitled to claim priority to earlier applications:

- The '079 patent asserted claims claim priority to foreign (JP) Patent Application No. 2002-363864, filed on December 16, 2002, and to foreign (JP) Patent Application No. 2002-000713, filed on January 7, 2002, or at least U.S. Pat. App. No. 10/320,371, filed December 17, 2002, or at least U.S. Pat. App. No. 11/290,589, filed December 1, 2005.
- The '948 patent asserted claims claim priority to foreign (JP) Patent Application No. 2006-280583, filed on October 13, 2006, or at least U.S. Pat. App. No. 11/907,479, filed October 12, 2007.
- The '093 patent asserted claims claim priority to foreign (JP) Patent Application No. 2008-258122, filed on October 3, 2008, or at least U.S. Pat. App. No. 12/549,587, filed August 28, 2009.

- The ’157 patent asserted claims claim priority to foreign (JP) Patent Application No. 2004-198040, filed on July 5, 2004, or at least U.S. Pat. App. No. 11/101,450, filed April 8, 2005.
- The ’606 patent asserted claims claim priority to foreign (JP) Patent Application No. 2004-375697, filed on December 27, 2004, or at least U.S. Pat. App. No. 11/301,086, filed December 12, 2005, or at least U.S. Pat. App. No. 14/571,729, filed December 16, 2014.
- The ’462 patent asserted claims claim to foreign (JP) Patent Application No. 2004-198040, filed on July 5, 2004, or at least U.S. Pat. App. No. 11/101,450, filed April 8, 2005.

VI. Disclosure Regarding Longitude Instrumentalities Practicing the Claimed Inventions (P.R. 3-1(f))

Longitude does not contend that any Longitude apparatus, product, device, process, method, act, or other instrumentality practices any claimed invention.

VII. Document Production Accompanying Disclosure (P.R. 3-2)

Patent Rule 3-2(a): Longitude is not aware of any documents evidencing a discussion with, disclosure to, or other manner of providing to a third party, or sale of or offer to sell, any claimed invention prior to the date of application for the asserted patent.

Patent Rule 3-2(b): LLL0001765–1817; LLL0001819–1822; LLL0004171–4318; LLL0004320–4381.

Patent Rule 3-2(c):

Patent	Certified File History Bates Range
’079 patent	LLL0003302–3416
’948 patent	LLL0001823–2362
’093 patent	LLL0003417–3603
’157 patent	LLL0003604–4157

Patent	Certified File History Bates Range
'606 patent	LLL0002363–2892
'462 patent	LLL0002893–3301

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Respectfully submitted,

s/ Aaron R. Fahrenkrog

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CERTIFICATE OF SERVICE

I certify that I served PLAINTIFF LONGITUDE LICENSING LIMITED'S P.R. 3-1 DISCLOSURE OF ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS and exhibits on counsel for Defendant BOE Technology Group Co., Ltd., via email, on March 11, 2024.

s/ Emily J. Tremblay
Emily J. Tremblay