

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

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| SOLAS OLED LTD., | § | |
| | § | |
| <i>Plaintiff,</i> | § | |
| | § | |
| v. | § | CIVIL ACTION NO. 2:21-CV-00105-JRG |
| | § | |
| SAMSUNG ELECTRONICS CO., LTD., | § | |
| SAMSUNG ELECTRONICS AMERICA, INC., | § | |
| | § | |
| <i>Defendants.</i> | § | |

CLAIM CONSTRUCTION MEMORANDUM AND ORDER

In this patent case, Plaintiff Solas OLED Ltd. (“Solas”) alleges infringement by Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc., (collectively, “Samsung”) of certain claims of U.S. Patent 8,526,767 (the “’767 Patent”). The patent relates to “[a] state machine gesture recognition algorithm for interpreting streams of coordinates received from a touch sensor,” ’767 Patent at [57].

The parties dispute the scope of two terms, with Samsung challenging each term as indefinite. Having considered the parties’ briefing,¹ along with arguments of counsel during the hearing conducted on December 16, 2021, the Court resolves the parties’ disputes as follows.

I. BACKGROUND

The ’767 Patent relates to gesture recognition by a two-dimensional touch sensor, which might be implemented, for example, as a touchpad of a computer or the screen of a cellular phone. See ’767 Patent (Dkt. No. 11-1) at 1:12–15, fig.12 (item 904), fig.13 (item 907). The patent

¹ Pl.’s Open’g Br., Dkt. No. 65; Defs.’ Resp. Br., Dkt. No. 66; and Pl.’s Reply Br., Dkt. No. 69.

explains that, at the time of invention, the typical methodology was to output, and then process, positional data (e.g., x- and y-coordinates) from a sensor using conditional if-then-else type statements. *See id.* at 2:47–65. That methodology, however, makes it difficult to add code for new gestures because code for recognizing one gesture often links to code for recognizing other gestures. *Id.* at 2:66–3:7.

To address this problem, the '767 Patent teaches “a state machine approach to designing and writing the gesture recognition algorithm.” *Id.* at 3:11–13. Generally, the claimed devices include a touch sensor, a position-processing unit for calculating a touch location and outputting a time series of positional data, and a gesture-processing unit that analyzes the data to distinguish gesture inputs. *Id.* at 3:12–21. The gesture processing unit includes gesture recognition code made up of linked state modules, *id.* at 3:21–25, which is central to the invention.

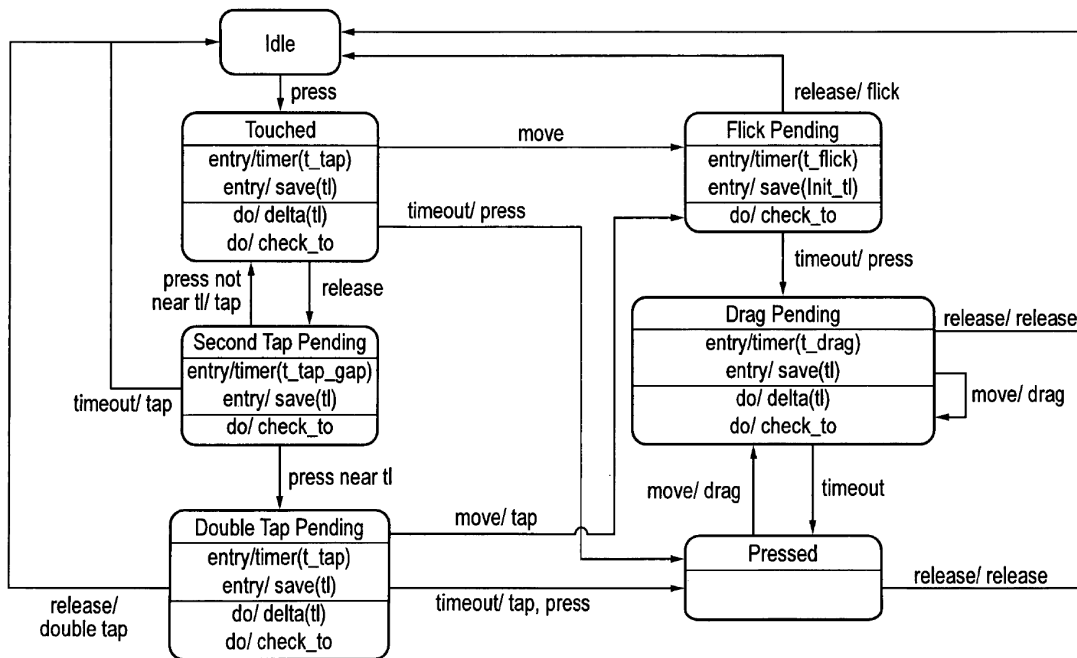


FIG. 1

Figure 1 of the '767 Patent (above) shows one embodiment of a gesture recognition state machine. The machine supports five gestures (tap, press, double tap, flick, and drag) and seven

states (Idle, Touched, Second Tap Pending, Double Tap Pending, Flick Pending, Drag Pending, and Pressed). The machine begins in the “Idle” state. When a user touches the sensor, the machine enters the “Touched” state, stores the touch location, and starts a timer. If the timer expires and the touch location remains the same, the machine generates a “press” event and transitions to the “Pressed” state. But if the touch location moves by more than a set distance from the initial touch location before the timer expires, the machine transitions to the “Flick Pending” state. If the user releases the touch, the machine enters the “Second Tap Pending” state and waits for a second touch within a certain time. In similar fashion, depending on the requirements for entering and leaving each state, the machine transitions between the states based on touch locations and timers. The machine can return to “Idle” from any of the six other states, which the patent calls “gesture-recognition states.” *See generally id.* at 8:36–10:50 (describing the 5 events, 7 states, and 17 transitions between states of Figure 1).

The disputed terms concern what the claims recite as “position-processing logic” and “gesture-processing logic.” Claim 1 concerns:

1. A touch sensor device comprising:
 - a sensor having a sensitive area extending in at least one-dimension and arranged to output sense signals responsive to proximity of an object to the sensitive area;
 - a processor operable to execute *position-processing logic stored in one or more tangible media*, the position-processing logic, when executed by the processor, configured to:
 - calculate positions of interactions with the sensitive area from an analysis of the sense signals; and
 - output a times series of data indicative of the interaction positions on the sensor, the interaction positions corresponding to touches; and

a processor operable to execute *gesture-processing logic stored in one or more tangible media*, the gesture-processing logic, when executed by the processor, configured to analyze the time series of data to distinguish one or more gesture inputs from the time series of data, the gesture-processing logic being coded with gesture-recognition code comprising a plurality of state-machine modules

Id. at 20:51–21:4 (emphasis added). Claim 11, which contains the first disputed term, then limits the relationship between the logic and hardware:

11. The device of claim 1, *the position-processing logic* being accommodated in, and running on, a first integrated circuit and *the gesture-processing logic* being accommodated in, and running on, one or more separate integrated circuits.

Id. at 22:9–12 (emphasis added). Claim 13 expressly refers only to “the gesture-processing logic”:

13. A single integrated circuit comprising:

a memory element;

a processor operable to execute logic stored in one or more tangible media, the logic, when executed by the processor, operable to:

receive a times series of data indicative of the interaction positions on a sensor, the interaction positions corresponding to touches;

analyze the time series of data to distinguish one or more gesture inputs from the time series of data, *the gesture-processing logic* being coded with gesture-recognition code comprising a plurality of state-machine modules, . . . ; and

output the recognized multi-touch gesture.

Id. at 22:44–23:12 (emphasis added).

The parties dispute the scope of two terms: (1) the entirety of Claim 11; and (2) “the

gesture-processing logic” in Claim 13.² Samsung alleges that both terms, as they appear in those claims, are indefinite.

II. LEGAL STANDARDS

A. Generally

“[T]he claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc). As such, if the parties dispute the scope of the claims, the Court must determine their meaning. *See, e.g., Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1317 (Fed. Cir. 2007); *see also Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390 (1996).

Claim construction, however, “is not an obligatory exercise in redundancy.” *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997). Rather, “[c]laim construction is a matter of [resolving] disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims” *Id.* A court need not “repeat or restate every claim term in order to comply with the ruling that claim construction is for the court.” *Id.*

When construing claims, “[t]here is a heavy presumption that claim terms are to be given their ordinary and customary meaning.” *Aventis Pharm. Inc. v. Amino Chems. Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013) (citing *Phillips*, 415 F.3d at 1312–13). Courts must therefore “look to the words of the claims themselves . . . to define the scope of the patented invention.” *Id.* (citations omitted). “[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as

² In their briefing, the parties also disputed the construction for “plurality of gesture-interpretation-state modules” in Claims 2, 3, and 6. At the claim-construction hearing, however, the parties announced their agreement that this term should be construed as “two or more state modules for interpreting the time series of data to recognize gestures.” The Court will adopt that construction.

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