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District Court of Mannheim
- Patent Dispute Chamber -
A1, 1
D-68159 Mannheim

Dr. Andreas von Falck
andreas.vonfalck@hoganlovells.com
D +49 211 13 68-330

Dr. Alexander Klicznik
alexander.klicznik@hoganlovells.com
D +49 211 13 68-332

Your reference 2 O 50/20
Our reference 1123650
Case no. 763439.000001

Direct service to opponent

3 February 2021

REPLY

In the matter of

JOLED Inc.

Attorneys-at-law Dr. Andreas von Falck, Dr. Alexander Klicznik, Dr. Roman Würtenberger, Lukas Sievers, Hogan Lovells International LLP, Kennedydamm 24, 40476 Düsseldorf

- Plaintiff -

versus

Samsung Electronics GmbH

Taylor Wessing Rechtsanwälte, Munich

- Defendant under 1) -

and

Samsung Electronics Co. Ltd.

Taylor Wessing Rechtsanwälte, Munich

- Defendant under 2) -

Date for hearing: 27 April 2021

Case ref.: 2 O 87/20

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we hereby reply to the Defendants' Statement of Defense dated 09 October 2019 (hereinafter: "SoD") and fully maintain our submissions made so far in their entirety. At the oral hearing we will additionally move for

the staying motions of the Defendants under 1) and 2) to be dismissed.

We deny the Defendants' factual submissions except as expressly acknowledged hereinafter.

The Complaint is founded. The Defendants' non-infringement arguments are based on an incorrect interpretation (see A.). On a correct understanding of the disputed claim features, the contested embodiments infringe the Patent in Suit (see C.). Contrary to the view taken by the Defendants, the Patent in Suit is also legally valid (see under D.). A staying of the present proceeding is therefore excluded.

Lastly, the Defendants' submissions on enforcement security are completely unsubstantiated and do not even remotely justify ordering of enforcement security in the amount of "*at least two billion euros*" as requested by the Defendant (see E.).

A.

Technical background and Patent in Suit

The Defendant' submissions on the technical background and the interpretation of the Patent in Suit need to be corrected and supplemented. Particularly Feature 1.3.1 with regard to the "*constant common reference voltage*" is interpreted much too narrowly by the Defendants. However, this is not at all supported by the wording of Claim 1 of the Patent in Suit.

I. The reference voltage

First of all, in reply to the Defendants' general submissions on the technical background of a reference voltage in a circuit or a system, the following corrections have to be made.

1. A reference voltage or reference potential is not limited to a permanently constant potential. Systems with variable reference potentials which e.g. may change as a function of a particular device state are likewise possible and known from a technical standpoint.
2. According to the Defendants' submissions, a reference voltage is "typically" a constant potential (paragraph 15 SoD). By this open wording, the Defendants themselves already admit that a reference voltage may also be variable.

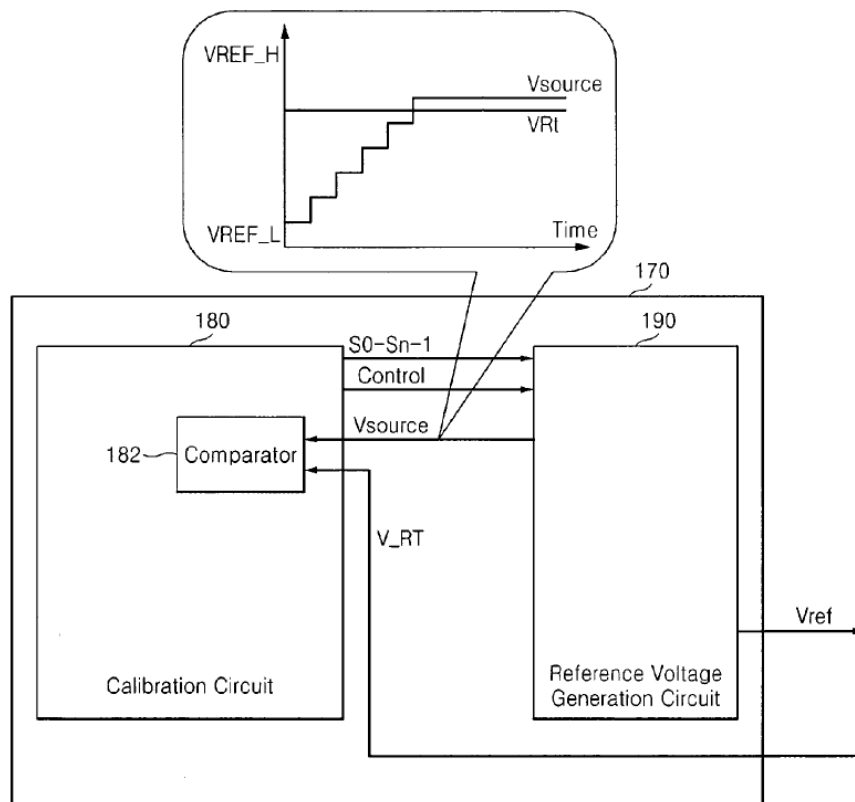
- a) For that we first refer to the US patent application US 2010/0283773 A1, which we submit as

Exhibit HL-B 8.

The rights in this patent application were assigned to the Defendant under 2).

- (1) Exhibit HL-B 8 refers to a circuit comprising a *reference voltage setup circuit* (cf. Abstract on the title page). This circuit is capable of generating variable reference voltages.
- (2) The curve of a variable reference voltage V_{source} is shown in Figure 6 of Exhibit HL-B 8, which we insert below:

FIG. 6



By way of explanation it is stated in this regard in paragraph [0040] of Exhibit HL-B 8:

FIG. 5 illustrates a schematic diagram of the timing IC 100, including a more detailed schematic diagram of an exemplary embodiment of the calibration circuit employable therein and **an exemplary timing diagram of a variable reference voltage employable therein;**

German translation:

*FIG. 6 zeigt eine schematische Darstellung des Ansteuer-ICs aus FIG. 5 einschließlich einer detaillierteren schematischen Darstellung einer beispielhaften Ausführungsform der darin verwendbaren Kalibrierschaltung und **eines beispielhaften Zeitdiagramms einer darin verwendbaren variablen Referenzspannung;***

It is further stated in paragraph [0083]:

In embodiments including the reference voltage generation circuit 190, the reference voltage generation circuit 190 may supply the calibration circuit 180 with a variable reference voltage V_{source} . The variable reference voltage V_{source} may be employed by the calibration circuit 180 to determine a voltage level of the test voltage V_{RT} .

German translation:

In Ausführungsformen, die die Referenzspannungs-Erzeugungsschaltung 190 enthalten, kann die Referenzspannungs-Erzeugungsschaltung 190 die Kalibrierschaltung 180 mit einer variablen Referenzspannung V_{source} versorgen. Die variable Referenzspannungsquelle V_{source} kann von der Kalibrierschaltung 180 verwendet werden, um einen Spannungspegel der Prüfspannung V_{RT} zu bestimmen.

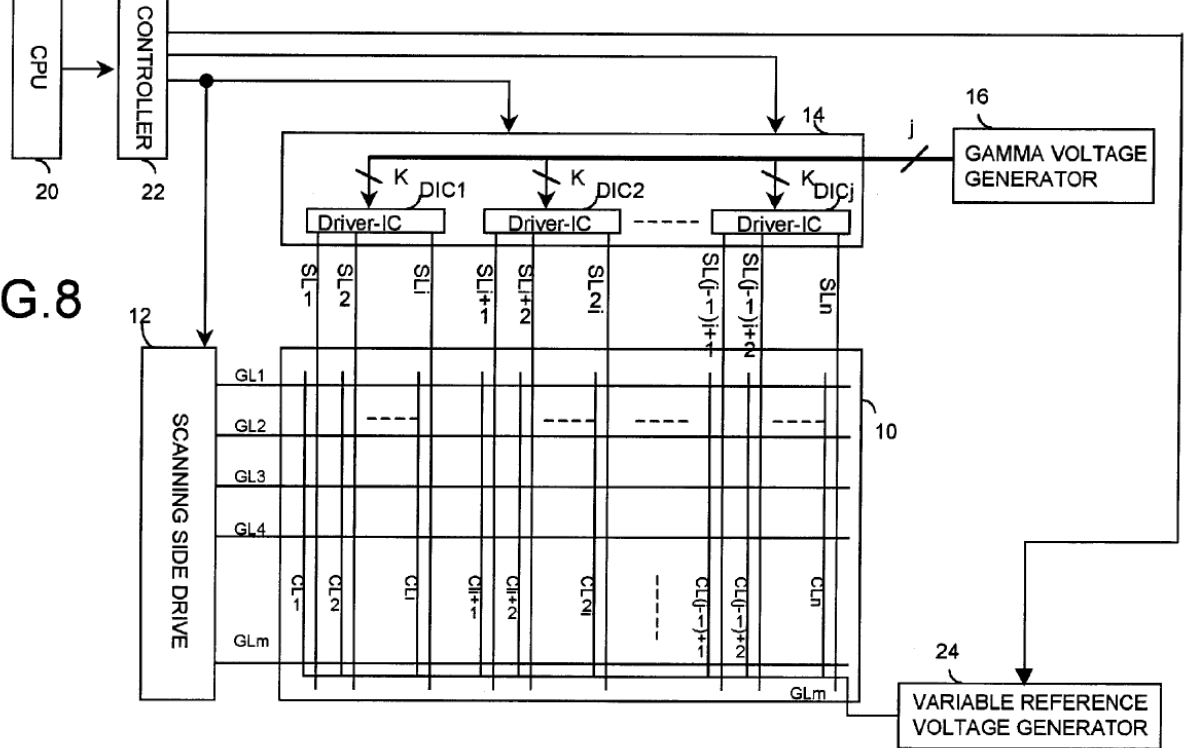
The circuit shown in Exhibit HL-B 8 thus shows that a reference potential may easily also be variable and is not a never changing value.

- b) We moreover refer to the US patent US 6 429 841 B1, which we submit as

Exhibit HL-B 9.

- (1) Exhibit HL-B 9 claims a liquid crystal display apparatus with active matrix.
- (2) In Figure 8 of Exhibit HL-B 9, which shows the configuration of a liquid crystal display apparatus according to an embodiment of the invention in diagrammatic form, a *variable reference voltage generator* 24 can be seen:

FIG. 8



- (3) On the function of the variable reference voltage generator 24 it is then stated in column 10, lines 27 ff. of Exhibit HL-B 9:

Furthermore, the liquid crystal display apparatus includes a variable reference voltage generator 24 commonly connected to the reference voltage lines CL1 to CLn, a central processing unit(CPU) 20 for processing an image data, and a controller 22 connected among the CPU 20, the scanning side drive circuit 12 and the data side drive circuit 14. The variable reference voltage generator 24 applies a reference voltage signal commonly to all the n reference voltage lines CL1 to CLn. The reference voltage signal generated at the variable reference voltage generator 24 changes gradually as shown in FIGS. 9A to 9C as the m gate lines GL1 to GLm are sequentially enabled.

German translation:

Darüber hinaus enthält die Flüssigkristallanzeigevorrichtung einen variablen Referenzspannungsgenerator 24, der gemeinsam mit den Referenzspannungsleitungen CL1 bis CLn verbunden ist, eine zentrale Verarbeitungseinheit (CPU) 20 zur Verarbeitung von Bilddaten und einen Controller 22, der zwischen der CPU 20, der Abtastseiten-Treiberschaltung 12 und der Datenseiten-Treiberschaltung 14 angeschlossen ist. Der variable Referenzspannungsgenerator 24 legt ein Referenzspannungssignal gemeinsam an alle n Referenzspannungsleitungen CL1 bis CLn an. Das am variablen Referenzspannungsgenerator 24 erzeugte Referenzspannungssignal ändert sich allmählich, wie in FIG. 9A bis 9C gezeigt, wenn die m Gate-Leitungen GL1 bis GLm sequentiell aktiviert werden.

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