

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SONY CORPORATION, SAMSUNG ELECTRONICS CO., LTD.,
SAMSUNG DISPLAY CO., LTD.

Petitioners,

v.

SURPASS TECH INNOVATION LLC

Patent Owner.

Case IPR2015-00863

Patent No. 7,202,843 B2

SUPPLEMENTAL DECLARATION OF THOMAS L. CREDELLE

I, Thomas L. Credelle do hereby declare that:

1. I have been retained by counsel for Petitioner Sony Corporation (“Sony”) to provide assistance regarding US Patent No. 7,202,843 (“the ’843 Patent”).

2. I previously submitted a Declaration in IPR2015-00863 (Ex. 1014) setting forth my Background and credentials (Credelle Decl. (Ex. 1024) at ¶¶2-14), and my curriculum vitae (Ex. 1016) which provides further details.

3. I submit this supplemental declaration in response to the Declaration and Testimony of William K. Bohannon. I incorporate by reference my testimony set forth my prior Declaration (Ex. 1014).

4. In preparation of this document, I have reviewed the following documents in addition to those listed in my prior Declaration:

- Declaration of William K. Bohannon in Response to Petition of Sony Corporation et al., identified as Ex. 2022;
- U.S. Patent No. 5,642,133 (“Scheffer”) (Ex. 2019);
- U.S. Patent No. 5,280,280 (“Hotto”) (Ex. 2020); and
- Transcript of January 27, 2016 Deposition of William K. Bohannon, identified as Ex. 1019.

5. In addition, in preparing this document, I have drawn on my experience and knowledge, as discussed above and described more fully in my CV, in the areas of LCD technology and flat panel displays.

6. I agree with Mr. Bohannon's assessment that a person of ordinary skill in the art in 2003 would have "the ability to understand the overdriving concept as it is discussed in the '843 patent." (*See* Bohannon Decl. (Ex. 2022) at ¶8.) I would expect this background to include experience in LCD control electronics. A person having this background would understand factors associated with driving electronic impulses, and would also understand the concepts of pixel voltage versus light transmission and pixel response time." (*Id.*) I disagree with Mr. Bohannon that a degree in Mathematics or Computer Science would be an appropriate educational background in relation to these concepts. (*See* Bohannon Decl. (Ex. 2022) at ¶8.)

I. Response to Mr. Bohannon's Comments on My Deposition Testimony That the LCD Panel in Suzuki Is an AMLCD

7. In paragraphs 34-40 of Mr. Bohannon's Declaration, he expresses disagreement with the testimony that I gave during my deposition on October 28, 2015, in which I described four indicators in Suzuki that Suzuki's LCD panel is an active matrix LCD: (1) Suzuki's use of the terms "source" and "gate" drivers; (2) Suzuki's achievement of blur-free moving images at a frame rate of about 60 frames per second, with each frame period lasting 16.6 ms; (3) Suzuki's use of the

term “hold” drive to describe one of its embodiments; and (4) Suzuki’s use of the term “overdriving.” I will address my Bohannon’s comments on my testimony in that order.

A. “Source” and “Gate” Drivers

8. The first indicator that Suzuki's liquid crystal panel is an active matrix liquid crystal display panel and not a passive matrix liquid crystal display panel is Suzuki’s use of the terms “source” driver and “gate” driver for the data driver and scan driver respectively. (See Suzuki (Ex. 1003), Fig. 1 reproduced below.)

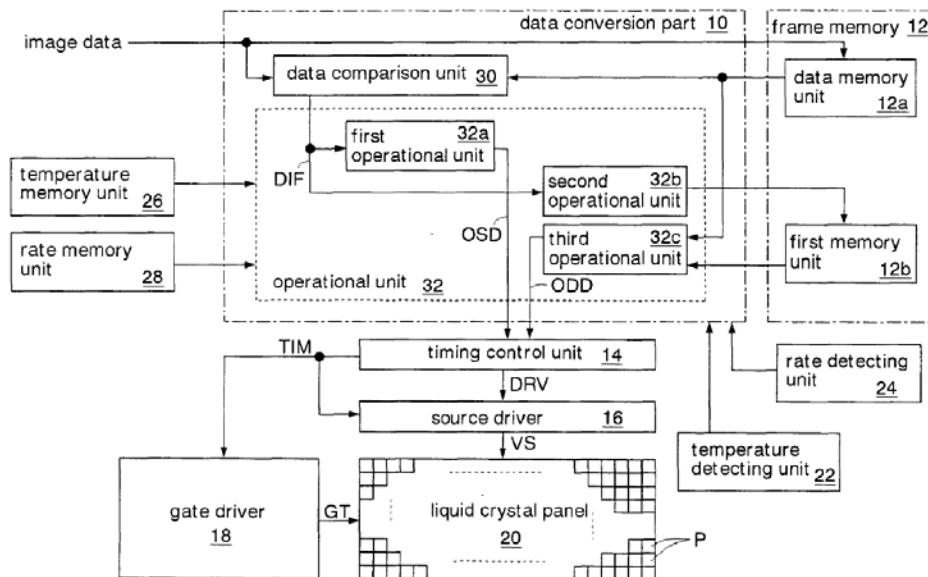


Fig. 1

Suzuki Fig. 1

Mr. Bohannon testified that he does not agree that this disclosure indicates “with certainty” that Suzuki discloses AMLCD. (Bohannon Decl. (Ex. 2022) at ¶ 40.) However, a person of ordinary skill in the art would have understood that the terms “source” driver and “gate” driver are applicable to AMLCD panels, and not to passive matrix panels, and, on that basis, would have assumed that Suzuki’s LCD panel is an AMLCD.

9. As an initial matter, I agree with Mr. Bohannon that the source driver 16 generates the applied voltage VS to be supplied to the pixels (shown in Suzuki Fig. 2) and the gate driver 18 generates gate signals GT for selecting pixels. (Bohannon Decl. (Ex. 2022) at ¶40.) Further Suzuki discloses “a plurality of pixels P which are formed in a matrix.” (Suzuki (Ex. 1003) at ¶ 47.)

10. An active matrix LCD panel comprises an array of pixels where each pixel includes a switch such as a TFT; the TFT has a “gate” which is used to open and close the switch, as well as a “source” and “drain” to allow current to flow to the liquid crystal capacitor, and optionally a storage capacitor. Passive matrix LCD panels do not include transistors (nor did they in the 2003 time frame).

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