# UNITED STATES PATENT AND TRADEMARK OFFICE

#### BEFORE THE PATENT TRIAL AND APPEAL BOARD

## SAMSUNG ELECTRONICS CO., LTD., SAMSUNG DISPLAY CO., LTD., and SONY CORPORATION, Petitioners,

v.

SURPASS TECH INNOVATION LLC, Patent Owner.

> Case IPR2015-00887 Patent 7,420,550 B2

PATENT OWNER SURPASS TECH INNOVATION LLC'S MOTION FOR OBSERVATIONS ON CROSS-EXAMINATION OF TSU-JAE KING LIU

DOCKET

Pursuant to the Scheduling Order dated September 9, 2015 (Paper 10),

Patent Owner Surpass timely moves for observations on cross-examination in light of Patent Owner's cross-examination of Petitioners' witness, Dr. Tsu-Jae King Liu on March 25, 2016. The transcript of Dr. Liu's cross-examination testimony is being filed as exhibit 2027 ("Ex. 2027").<sup>1</sup>

#### **Observations on Cross-Examination**

- Ex. 2027 at 141:23-142:23: Dr. Liu testified that the resistor-surroundedby-a-circle symbol she drew on Exhibit E is used in Janssen '708 (Ex. 1004). This testimony is relevant to the technology disclosed by Janssen '708.
- Ex. 2027 at 142:24-144:22: Dr. Liu testified that Figs. 1-4 and 7 of Janssen '708 include the pixel symbol (labeled 46 and 100) that she drew on Exhibit E. This testimony is relevant to the technology disclosed by Janssen '708.
- 3. Ex. 2027 at 144:23-145:22: Dr. Liu testified that the pixel symbols 46 and 100 of Janssen '708 are described as a "pixel" only. This testimony is relevant to the technology disclosed by Janssen '708.

<sup>&</sup>lt;sup>1</sup>Ex. 2027 begins on page 135 for consistency with the transcript page numbers.

- 4. Ex. 2027 at 151:8-152:5; 157:18-20; 165:1-3: Dr. Liu testified that Janssen '708 does not describe its technology as "liquid crystal," and does not label any symbol as  $R_{LC}$  or  $C_{LC}$ . This testimony is relevant to the technology disclosed by Janssen '708.
- 5. Ex. 2027 at 153:14-154:3: Dr. Liu testified that she conducted a prior art search after her previous deposition, but did not "specifically" search for art using Janssen's pixel symbol or the symbol of Exhibit E. This testimony is relevant to the technology disclosed by Janssen '708 and to the probative weight of Dr. Liu's testimony about Janssen '708's pixel symbol.
- 6. Ex. 2027 at 156:7-15: Dr. Liu testified that Ex. 1022, Kozaki, does not use the symbol that Dr. Liu drew on Exhibit E. This testimony is relevant to the technology disclosed by Janssen '708 and to the probative weight of Dr. Liu's testimony about Janssen '708's pixel symbol in view of Kozaki.
- 7. Ex. 2027 at 156:21-25: Dr. Liu testified that Ex. 1022, Kozaki discloses an ideal equivalent circuit of a liquid crystal picture element, but does not model the liquid crystal element with a resistor symbol in this ideal equivalent circuit. This testimony is relevant to the technology disclosed

by Janssen '708 and to the probative weight of Dr. Liu's testimony about Janssen '708's pixel symbol in view of Kozaki.

- 8. Ex. 2027 at 159:21-160:4: Dr. Liu testified that Ex. 1023, Johnson, does not use the symbol that Dr. Liu drew on Exhibit E. This testimony is relevant to the technology disclosed by Janssen '708 and to the probative weight of Dr. Liu's testimony about Janssen '708's pixel symbol in view of Johnson.
- 9. Ex. 2027 at 163:1-4: Dr. Liu testified that Ex. 1024, Moriyama, does not use the symbol that Dr. Liu drew on Exhibit E. This testimony is relevant to the technology disclosed by Janssen '708 and to the probative weight of Dr. Liu's testimony about Janssen '708's pixel symbol in view of Moriyama.
- Ex. 2027 at 168:2-171:3; 173:18-20; 175:7-11: Dr. Liu testified that she only reviewed two of three "References Cited" on the face of Ex. 1025 issued to Janssen, and she confirmed that she does not know whether the third Reference Cited (Matsushita) is directed to active-matrix LCD technology. This testimony is relevant to the probative weight of Dr. Liu's testimony about the examination of Ex. 1025 and about the examiner's interpretation of Janssen's "pixel" elements 46 and 100. See Ex. 2027 at 177:11-15.

- 11. Ex. 2027 at 177:16-178:16: Dr. Liu confirmed her earlier testimony that she had not seen Janssen's pixel symbol 46/100 prior to reviewing Janssen '708 for this matter, and agreed that the patent examiner who examined Ex. 1025 may have been equally unfamiliar with that symbol. This testimony is relevant to the probative weight of Dr. Liu's testimony about the examination of Ex. 1025 and about the examiner's interpretation of Janssen's "pixel" elements 46 and 100.
- 12. Ex. 2027 at 179:21-180:13: Dr. Liu confirmed that a thin film transistor cannot provide the required current for an incandescent lamp. This testimony is relevant to whether Janssen '708 could be modified to use a thin-film transistor to provide current to Janssen's "pixel" elements 46 and 100.
- 13. Ex. 2027 at 181:16-24: Dr. Liu confirmed that there were other types of transistors (*i.e.* transistors other than thin film transistors) in 2001 that could provide sufficient current for an incandescent lamp. Dr. Liu also testified that Janssen '708 does not describe the disclosed "transistors" as "thin film transistors." This testimony is relevant to whether Janssen '708 discloses or could be modified to use a thin-film transistor to provide current to Janssen's "pixel" elements 46 and 100.

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