

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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XILINX, INC.  
Petitioner

v.

INTELLECTUAL VENTURES I LLC  
Patent Owner

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Case IPR2013-00112  
Patent 5,779,334

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INTELLECTUAL VENTURES' PATENT OWNER OBSERVATIONS ON  
TESTIMONY OF DR. BRUCE BUCKMAN

As permitted by the Board in Paper 37, Patent Owner has the following observations on the November 12, 2013, cross-examination testimony of Petitioner's Reply Declarant, Dr. Buckman, Exhibit 2019:

1. On page 46, lines 6-17, Dr. Buckman testified that elements 20 and 21 of Lee control element 11 in Figures 1 and 2:

Q: What light shutter matrix system do elements 20 and 21 of Lee control?

A: Elements 20 and 21 of Lee control number 11 in figures 1 and 2.

Q: How many of those LC panels do these elements 20 and 21 control?

A: They control a single light shutter matrix system which adds in Lee's time multiplexing scheme of producing color as 3, but it acts as 3 at separate times during its operation because of the time multiplexing that I described to you earlier that is effected by the color wheel and its rotation.

Lee elements 20 and 21 are referred to in the Lee specification as LCD driver 20 and image controlling circuit 21. (Col. 3, lines 46-52.) Lee element 11 is referred to in the Lee specification as LCD panel 11. (*Id.*) In the testimony above, Dr. Buckman refers to Lee 11 as a "single light shutter matrix system." However, in Dr. Buckman's initial Declaration (Exhibit 1005), he says that "Lee notes using a 'light shutter controlling circuit 19' for controlling light shutters 14R, 14G, and 14B in order to modulate the light beams." (Ex. 1005, p. 24.) Dr. Buckman's newly identified video controller in Lee (i.e., elements 20 and 21) does not control

the light shutters 14R, 14G, and 14B, which Buckman originally identified as the claimed “light shutter matrix” and on which the Board granted the trial. (*Id.*)

2. On page 39, lines 19-24, Dr. Buckman admits that Takanashi does not have a matrix when the write light is off.

Q: So when the write light is off, is there or is there not a physical matrix to the Takanashi system?

A: There's no variation in the optical properties of the liquid crystal with respect to position, so when the drive is off, no matrix of transmissivity is created.

This testimony further strengthens the argument in the Patent Owner Response that Takanashi does not meet the Board’s definition of a “light shutter matrix system” requiring “a rectangular *arrangement of elements* capable of limiting the passage of light.” (Paper 26, pp. 26-27, emphasis added.) The above admission also supports the argument that Takanashi does not disclose “equivalent *switching matrices*,” since the alleged “matrix of transmissivity” in Takanashi ceases to exist in the off state.

3. On page 36, lines 11 to 19, Dr. Buckman acknowledges that the light-written film of a Kodachrome slide does not use a matrix:

A: That [transparent foil on an overhead projector] could be an exception, yes, that's – one that's not using a matrix.

Q: Any others? Any other examples?

A: None that I can think of as we sit here well, okay, a -- a Kodachrome 35-millimeter slide projector, same basic idea.

This is a change from Dr. Buckman's arguments on page 11 of his declaration (Ex. 1012), which allege that any write light would form a "matrix" because the "spot of write light on the OASLM cannot be made infinitely small, but rather has a lower limit on its size dictated by the optics in the system." Since the same limits are present in Kodachrome slide processing, Dr. Buckman's admission further supports the argument that Takanashi's disclosure of a continuous-film SLM is not an inherent disclosure of a "light-shutter matrix."

4. On page 79, lines 22-25, Dr. Buckman discusses how the "second controller" box that he drew to annotate Fig. 3 of Miyashita in his '545 Declaration is incorrect because it included too many elements:

Q: So how is the drawing in the -- with regard to the '545 patent, how is the drawing in Exhibit 2017 wrong? How is that incorrect?

A: Well, it -- it calls out a lamp control circuit, that's correct. It calls out a -- a fan control circuit, that's correct. It has a box for the -- excuse me -- the second controller that appears to go around everything, including some hardware, which is -- which is not correct.

Thus, Dr. Buckman agrees with Patent Owner's argument in IPR2013-00029, Patent Owner Reply to Opposition to Motion to Amend, pp. 3-4, that the "large box" drawn to annotate Fig. 3 of Miyashita does not correspond to a controller.

5. On page 15, lines 7-25, Dr. Buckman admits that a video controller must operate based on or in accordance with a video signal:

Q: Can a video controller work without receiving a video signal?

A: A video controller would have to receive some -- some result of processing a video signal. It might not receive the raw video signal. It would -- it would have to receive something -- I think the proper word would be ***based on the raw video signal***.

Q: So without receiving something based on the raw video signal, the video controller would not work? Is that what you're saying?

A: The raw video signal would be something that contains the information in the image, in the set of images, to be processed. The controller might have to act on those to produce the signals necessary to -- to drive the display. So it's at least -- it's based on -- and all -- by "based on" here, anything that's based on that enumerates one element that influences the final result to the extent that that's what "based on" means and that's how I'm using it here. It would be -- ***it would be based on a video signal***.

(Emphasis added.) Dr. Buckman's testimony agrees with Patent Owner's proposed claim construction for "video controller" that it is a "component that controls light-shutter matrices to facilitate the display of video in accordance with a video signal." (Patent Owner Response, Paper 26, pp. 15-17.)

6. On page 74, line 23 to page 75, line 8, Dr. Buckman was asked about the change in annotations of the figures of Lee between this proceeding and the related IPR proceeding:

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