

# **EXHIBIT A**

**REDACTED**

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

LG DISPLAY CO., LTD.,

Plaintiff,

v.

AU OPTRONICS CORPORATION;  
AU OPTRONICS CORPORATION  
AMERICA; CHI, MEI OPTOELECTRONICS  
CORPORATION; and CHI MEI  
OPTOELECTRONICS USA, INC.,

Defendants.

)  
) C.A. No. 06-726-JJF  
) C.A. No. 07-357-JJF  
) C.A. No. 08-355-JJF

) **CONSOLIDATED CASES**

) **REDACTED - PUBLIC VERSION**

**DECLARATION OF JONATHAN D. PUTNAM  
IN SUPPORT OF AU OPTRONICS CORPORATION'S REPLY BRIEF  
IN SUPPORT OF ITS MOTION FOR PERMANENT INJUNCTION**

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*Attorneys for AU Optronics Corporation and  
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August 9, 2010

Redacted Version: August 17, 2010

I, Jonathan D. Putnam, hereby declare that:

1. I am over the age of 18 years-old and have personal knowledge about the facts described below. If called as a witness, I could testify truthfully about the facts recited in this declaration under oath. I make this declaration in support of AU Optronics Corporation's ("AUO") Motion for Permanent Injunction.

**I. INTRODUCTION AND QUALIFICATIONS**

2. I testified at trial in *LG Display Co., Ltd. v. AU Optronics Corp., et al.*, on June 3 and 4, 2009. In that testimony, I described my education, background, training, experience and expertise in measuring damages when patents are found valid and infringed.

3. I also testified extensively on damages related to the four AUO patents asserted at trial in this matter, U.S. Patent No. 6,778,160 ("160 Patent"), No. 6,689,629 ("629 Patent"), No. 7,125,157 ("157 Patent") and No. 7,090,506 ("506 Patent"). On July 8, 2010, this Court awarded damages to plaintiff AUO in the amount to which I testified at trial.

4. I submitted a declaration in support of AUO's Motion for Permanent Injunction. D.I. 1526. My opinions there, and in the present declaration, also draw on my training as a law professor teaching property law and intellectual property law.

5. AUO has moved to enjoin further infringement of AUO's U.S. patents by defendants LG Display Co., Ltd. and LG Display America, Inc. (collectively, "LGD"). In opposing AUO's motion, LGD has, among other things, (mis)characterized my prior testimony and provided an affidavit from LGD's damages expert, Arthur Cobb. I have been asked by counsel for AUO to respond to LGD's characterizations of my prior

### III. LGD'S FACTUAL AND ECONOMIC ERRORS

13. Counsel for AUO have asked me to respond to various contentions made by LGD in its Memorandum of Opposition to AUO's motion for an injunction. In addition, I have been asked to respond to the declaration made by LGD's damages expert, Mr. Cobb ("Cobb Declaration").

14. As a threshold matter, I observe that Mr. Cobb's role to date in the relevant portion of the trial (*i.e.* the remedy for LGD's infringement of AUO's patents) has been extremely limited:

LGD's [*sic*] has offered no expert opinion on damages for AUO's patents. LGD's expert, Mr. Cobb, was present during Phase I of the trial but did not testify in LGD's case regarding AUO's patents. To the extent Mr. Cobb challenged the methodology used by Dr. Putnam during Phase II of the trial, the Court is not persuaded by Mr. Cobb's testimony.<sup>1</sup>

Except to list competitors and characterize competition in the LCD industry (sourcing from AUO's own disclosures), Mr. Cobb cites none of his prior analysis in his declaration.

15. Most of Mr. Cobb's declaration comprises quotations and data taken from the expert reports that I filed previously. Rather than offer any independent economic analysis, LGD tries to use my prior work against AUO. But, as I explain below, LGD's claims are incorrect, unsupported, inapplicable and/or irrelevant.

#### A. LGD's incorrect statements

##### (1) The "top 5%" of AUO's patents

16. LGD argues that I "admitted" that AUO's patents did not fall within the top 5% of the patents in its portfolio. While it is true that the patent citation method that I employed for the purposes of ranking the asserted patents did not place the asserted patents

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<sup>1</sup> D.I. 1544, Memorandum Opinion, July 8, 2010, p. 10 (internal citation omitted).

in the top 5%, it is also true that I provided an alternative calculation based on the assumption that the patents should be placed in the top 5%.<sup>2</sup> It was this alternative assumption and calculation, which disregarded the patent citation rankings, on which the Court relied in awarding damages: “Based on the value share of each patent in AUO’s portfolio and based on the assumption that these patents are in the top 5% of AUO’s portfolio, Dr. Putnam determined that AUO’s damages for infringement of all four patents would total \$305,399 ...”<sup>3</sup>

17. The 5% assumption is significant. In Figure 1, I have shown a so-called “Lorenz graph” of the relationship between the ranking of patents in a portfolio and their aggregate value.<sup>4</sup> A Lorenz graph is nothing more than a means of representing the proportion of value attributable to the bottom *X%* of patents in the portfolio. In this case, the graph shows that the bottom 95% of patents account for about 40% of the value of the portfolio, which means that the top 5% of patents must account for 60% of the portfolio’s value. In a portfolio of 1,000 patents, the top 5% (50 patents) are then worth an average of

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<sup>2</sup> D.I. 1368 at 735:14-20; 745:23-746:6. As I observed at trial, this is not a “perfect method of evaluating commercial significance.” D.I. 1368 at 728:1-734:6.

<sup>3</sup> D.I. 1544 at p. 8.

<sup>4</sup> In constructing this graph, I used the same patent value distribution I used in the “count, rank and divide” method. As I explained in the Appendix to my supplemental report, the distribution most closely related to the patents-in-suit is for “the electronics industry (excluding Japan),” reported in Table 5 of M. Schankerman, “How valuable is patent protection? Estimates by technology field,” *RAND Journal of Economics* 29(1), pp. 77-107 (1998). Also, as I explained there:

These estimates are not used to estimate the value of the asserted patents. They are used to estimate the share of value attributable to a patent occupying a given rank in the distribution. This share can then be multiplied by any estimate of total value, which in this case is the plaintiff’s claim against the defendant or defendant’s expected profit over the period of alleged infringement, to obtain the contribution of the asserted patents to that total.

$60\% / 50 = 1.2\%$  each of the portfolio's total value. The bottom 95% (950 patents) are worth an average of  $40\% / 950 = 0.04\%$  each. In other words, the average top-5% patent is worth about 29 times as much as the average bottom-95% patent.

18. LGD goes on to argue that “[t]he Court's determination was that AUO had not established ‘commercial value and significance’ to justify a higher amount of damages.”<sup>5</sup> But LGD's selective quotation misrepresents the Court's finding: “...the Court is not persuaded that AUO has established commercial value and significance beyond the top 5% assumption used by Dr. Putnam in the first instance...”<sup>6</sup> Contrary to LGD's claim, the Court did not find that AUO's patents lack commercial value and significance. Having found that the patents deserved to be valued among the top 5%, the Court did not find evidence to value them even more highly. By analogy, LGD would find that an honor student is “not a good student” because there exists insufficient evidence to rank him more precisely within the top 5% of all students. LGD's argument is both false and deceptive.

**(2) “De minimis” damages**

19. LGD characterizes the Court's damages award as “de minimis.”<sup>7</sup> This characterization ignores the fact that the amount awarded is exactly what AUO asked for. It also ignores the relationship between (small, retrospective) damages and (large, prospective) relief. It also ignores the conservative nature of the calculations used to arrive at the damages figure.

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<sup>5</sup> D.I. 1552 at p. 7.

<sup>6</sup> D.I. 1544 at p. 11.

<sup>7</sup> D.I. 1552 at p. 15.

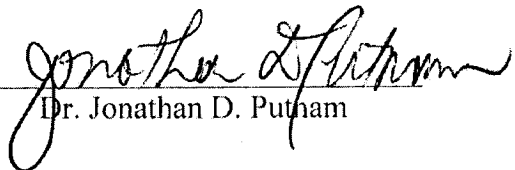
inefficient for the withholding of private information bearing on an infringer's costs of compliance to work to the infringer's advantage in deciding whether or not compliance must occur.

**D. Public policy towards settlement**

100. Public policy favors the settlement of litigation. In addition to the conservation of judicial and private resources, settlement has another salient benefit that is especially important to an economist. A settlement reflects the incorporation of each party's private information into a price set voluntarily at arm's length.<sup>92</sup> Such prices are efficient (i.e., superior), relative to prices set by some other means, because other price-setting mechanisms must necessarily rely on relatively imperfect information; inferior information produces inferior pricing.<sup>93</sup>

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Executed on August 9, 2010, at Boston, MA

By:   
Dr. Jonathan D. Putnam

<sup>92</sup> In *United States v. Cartwright*, 411 U.S. 546, 559 (1973), the Supreme Court defined "fair market value" as:

the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of relevant facts.

The market price is, in other words, the rate observed in a (1) voluntary, (2) informed, (3) arms' length, (4) exchange.

<sup>93</sup> Economists often attribute the relative inefficiency of the Soviet Union and similar centrally planned economies to the inferiority of the central price setting mechanism, relative to a decentralized market economy.