IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS SHERMAN DIVISION

LARGAN PRECISION CO., LTD.,	§
Plaintiff,	§ §
	8 §
v.	§
ABILITY OPTO-ELECTRONICS	§
TECHNOLOGY CO., LTD.; NEWMAX	§ §
TECHNOLOGY CO., LTD.; AND HP	§
INC.	§

Civil Action No. 4:19-CV-696-ALM Jury Trial Demanded

Defendants.

DECLARATION OF JOSÉ SASIÁN, PH.D., REGARDING CLAIM CONSTRUCTION OF UNITED STATES PATENT NOS. 7,274,518, 8,395,691, 8,988,796, AND 9,146,378

I, José Sasián, declare as follows:

I. INTRODUCTION

1. My name is José Sasián, Ph.D. I am over the age of twenty-one, competent to make this declaration, and have personal knowledge of the matters stated herein.

2. I have been retained to opine on and provide expert testimony regarding United States Patent Nos. 7,274,518 (the "'518 Patent"), 8,395,691 (the "'691 patent"), 8,988,796 (the "'796 Patent"), and 9,146,378 (the "'378 Patent") (collectively, the "Asserted Patents"). My understanding is that plaintiff Largan Precisions Co., Ltd. ("Largan") alleges that defendants Ability Opto-Electronics Technology Co., Ltd. ("Ability"), Newmax Technology Co., Ltd. ("Newmax"), and HP Inc. ("HP") (collectively "Defendants") infringe the Asserted Patents.

3. For this declaration, I have been asked to opine on the construction of certain claim terms of the Asserted Patents. To further assist the Court in its claim construction analysis, I also have been asked to opine on the technology background, subject matter, and teachings of the Asserted Patents and their field of art.

4. My understanding is that the Court will hold a claim construction hearing. If I am called upon to testify at this hearing, or at any other proceeding, I may cite other documents or information similar to those specifically identified, cited, or discussed in this declaration. I may also use pictures, demonstrations, graphics, animations, presentations, or other audiovisual aids to explain and demonstrate my analysis and opinions.

5. I am currently being compensated at my standard consulting rate of \$525 per hour. I am also being reimbursed for all reasonable expenses that I incur related to this engagement. My compensation is not dependent on the substance of my testimony or the outcome of this case and I have no personal interest in the outcome of this case. 6. The materials I have considered to prepare this declaration include: the Asserted Patents, the prosecution histories of the Asserted Patents, and the proposed claim constructions of the Plaintiff and of the Defendants. I have also considered and am relying upon my expertise, knowledge, and experience in the subject matter of the Asserted Patents including in the field, history, and teachings of optical engineering and instruments, optics, lenses, lens systems, imaging and sensors, and photographic cameras. I have also considered and relied upon the knowledge, education and experience of a person of ordinary skill in the art ("POSITA"). I have also considered and relied upon any of the other materials identified, discussed, or cited in this declaration.

7. This declaration, including the materials I have considered, is based on the information currently available to me. If any additional information becomes available, I reserve the right to consider those additional materials and to amend and supplement my analysis and opinions. To date, I have not received or reviewed any claim construction briefing by Largan, or any expert opinion by Largan's technical expert. To the extent that any expert witness provides testimony on behalf of Largan or Largan provides claim construction briefing, I reserve the right to review and respond to that testimony, evidence, and briefing.

II. BACKGROUND AND QUALIFICATIONS

8. My qualifications and professional experience are described in detail in my Curriculum Vitae, which is attached as Exhibit 1. The following is a brief summary of my relevant qualifications and professional experience.

9. I have extensive academic and industry experience with optical engineering. Specifically, I have over thirty years of academic and industry experience in the field of optical sciences and optical engineering in general, including optical instrumentation, optical design, opto-mechanics, and optical fabrication and testing. 10. I am currently a full-time, tenured Professor of Optical Sciences at the Wyant College of Optical Sciences at the University of Arizona in Tucson, Arizona, a position I have held since 2002. As a professor, I teach and perform research in the field of optical design. For example, I teach my students how to design lenses and mirrors and how to think about light so that they can design useful optical systems.

11. As part of my academic and research responsibilities, I am frequently involved with the design, fabrication, and testing of optical devices. Prior to receiving tenure, I was an Associate Professor of Optical Sciences at the University of Arizona from 1995 to 2001. Prior to joining the University of Arizona faculty, I was a member of the technical staff of AT&T Bell Laboratories from 1990 to 1995. From 1984 to 1987, I was a Research Assistant, and from 1988 to 1990, I was a Research Associate, in the Optical Sciences Center at the University of Arizona. From 1976 to 1984, I was an optician at the Institute of Astronomy at the University of Mexico.

12. I received a Bachelor of Science degree in Physics from the University of Mexico in 1982, a Master of Science degree in Optical Sciences from the University of Arizona in 1987, and a Ph.D. degree in Optical Sciences from the University of Arizona in 1988. My research areas include optical design, fabrication, and testing of optical instruments, astronomical optics, diffractive optics, opto-mechanical design, light in gemstones, and light propagation.

At the University of Arizona, I have taught the courses Lens Design OPTI 517
(1997-present), Introduction to Aberrations OPTI 518 (2005-present), Advanced Lens Design
OPTI 696A (2008, 2012, 2017, 2019), Illumination Optics Seminar (1997-2000), Introduction to
Opto-mechanics OPTI 690 (1998, 2001, 2003, 2004, 2005) and Optical Shop Practices OPTI
597A (1996-present). I teach students how to design lens systems, how to grind, polish, and test

aspheric surfaces, how to mount lenses properly so that their physical integrity is preserved, and how to align lens systems.

14. I have directed several student reports, theses, and dissertations in the areas of lens and mirror design. I have lectured regarding my work, and have published, along with students and colleagues, over one hundred scientific papers in the area of optics. These include technical papers, student reports and theses done under my direction, related to miniature lenses. For example:

- Yufeng Yan, Jose Sasian, "Miniature camera lens design with a freeform surface," Proc. SPIE 10590, International Optical Design Conference 2017, 1059012 (27 November 2017); doi: 10.1117/12.2292653.
- Dmitry Reshidko, Jose Sasian, "Optical analysis of miniature lenses with curved imaging surfaces," Appl. Opt. Oct. 54(28):E216-23, 2015.
- Sukmock Lee, Byongoh Kim, Jiyeon Lee, and Jose Sasian, "Accurate determination of distortion for smart phone cameras," Applied Optics, Vol. 53, Issue 29, pp. H1-H6 (2014).
- Ying Ting Liu, "Review and Design of a Mobile Phone Camera Lens for 21.4 Mega-Pixels Image Sensor," M. Sc. Report, University of Arizona, 2017.
- Luxin Nie, "Patent Review of Miniature Camera Lenses," M. Sc. Report, University of Arizona, 2017.
- Cheng Kuei-Yeh, "Cell phone zoom lens design and patent research," M. Sc. Report, University of Arizona, 2010.
- Rob Bates, "Design for Fabrication: Miniature Camera Lens Case Study," M. Sc. Report, University of Arizona, 2008.

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