

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

XILINX, INC.
Petitioner
v.
INTELLECTUAL VENTURES I LLC
Patent Owner

Case IPR2013-00112
Patent 5,779,334

DECLARATION OF ROBERT SMITH-GILLESPIE

I. INTRODUCTION

1. I have been retained as an expert in video projection systems by Foley & Lardner LLP, which represents Intellectual Ventures Management (of which Intellectual Ventures I LLC is an affiliate) in this matter.

2. The documents that I have considered in developing my opinions set forth in this declaration include: Ex. 1001 (U.S. Patent No. 5,779,334 to Kikinis), Ex. 1002 (U.S. Patent No. 5,264,951 to Takanashi), Ex. 1003 (U.S. Patent No. 5,287,131 to Lee), Ex. 1004 (U.S. Patent No. 5,777,796 to Burstyn), Ex. 1005 (Declaration of Dr. Buckman), Ex. 1006 (CV of Dr. Buckman), Ex. 1007 (File history of U.S. Patent No. 5,779,334), Ex. 1008 (Supplemental Declaration of Dr. Buckman), Ex. 1009 (Dr. Buckman Book Excerpt), Ex. 2001 (Definitions from the American Heritage College Dictionary, 10th edition, 2001), Ex. 2002 (Decision from Related IPR2013-00029), Ex. 2003 (U.S. Patent No. 6,002,207 to Beeteson), Ex. 2004 (U.S. Patent No. 6,985,253 to Figueroa), Ex. 2005 (Paper by Stahl et al.), Ex. 2006 (Definition from The Compact Edition of the Oxford English Dictionary), Ex. 2007 (File History of U.S. Patent No. 5,632,545 to Kikinis), Ex. 2010 (Deposition Transcript of Dr. Buckman), Ex. 2011 (Deposition Transcript of Dr. Buckman from IPR2013-00029), Ex. 2012 (Excerpt from Flat-Panel Displays and CRTs by Tannas), Ex. 3001 (Definitions from the American Heritage College Dictionary, 10th edition, 2001), Ex. 3002 (Definition from the Newnes Dictionary

of Electronics, Fourth Edition, 2002), the Xilinx Petition (Paper 2), the Patent Owner Preliminary Response (Paper 12), the Board's Decision Instituting IPR (paper 14), Patent Owner's Objection to Evidence (Paper 17), U.S. Patent No. 5,632,545 to Kikinis, U.S. Patent No. 5,784,038 to Irwin (from Related IPR2013-00029), Declaration of Dr. Buckman (from Related IPR2013-00029), the Patent Owner Preliminary Response (from related IPR2013-00029), the Board Decision Instituting IPR (from related IPR2013-00029), Transcript from the Deposition of Dr. Buckman (from related IPR2013-00029), U.S. Patent No. 4,368,963 to Stolov (which appears on the face of U.S. Patent No. 5,779,334 to Kikinis), U.S. Patent No. 5,135,300 to Toide et al. (which appears on the face of U.S. Patent No. 5,779,334 to Kikinis), U.S. Patent No. 5,394,204 (which appears on the face of U.S. Patent No. 5,779,334 to Kikinis), U.S. Patent No. 5,398,086 to Nakano (which appears on the face of U.S. Patent No. 5,779,334 to Kikinis), and U.S. Patent No. 5,481,320 to Konuma (which appears on the face of U.S. Patent No. 5,779,334 to Kikinis).

3. I am being compensated on a per hour basis for my time spent working on issues in this case. My compensation does not depend upon the outcome of this matter or the opinions I express.

4. Additional information may become available which would further support or modify the conclusions that I have reached to date. Accordingly, I

reserve the right to modify and/or enlarge this opinion or the bases thereof upon consideration of any further discovery, testimony, or other evidence, including any issues raised by any expert or witness of petitioner Xilinx, or based upon interpretations of any claim term by the Patent Office different than those proposed in this declaration.

II. QUALIFICATIONS

5. My curriculum vitae is Ex. 2009. My experience in the display field dates back to the late 1980's when I worked as the lighting specialist in the Flight Deck Packaging group at Honeywell's Commercial Air Transport Division. Initially my work focused on development of early technology liquid crystal display (LCD) components for flight control panels on commercial aircraft. I later participated in the technology development and productization of the active matrix LCD panels for the Boeing 777 program. In the early phases of this program we performed trade studies aimed at assessing the appropriate technology for replacing cathode ray tube (CRT) instruments on the flight deck. Technologies that I evaluated include rear projection micro-display LCD panels and thin-film transistor (TFT) LCDs. Following my work at Honeywell, I moved to Three-Five Systems where I worked again as a technical specialist for displays and lighting. While there, I interfaced with the liquid crystal on silicon (LCOS) projection team (later to become Brillian Corp.) on light engine design (light sources, thermal

control) and reflective LCOS optical evaluation (radiometric characterization).

While at Rosen Products I again worked as a senior technical specialist in displays where I was primarily focused on video system integration for automotive and aviation LCD display platforms. My work there included specifying and evaluating video controllers, source equipment, and displays for automotive rear seat entertainment and aircraft cabin entertainment systems.

6. I am a named inventor on U.S. Patent No. 7,660,040 and European Patent No. 1724621A1, which are directed to a reflective material for LCD display backlighting. I also have a pending patent application (U.S. 13/564,045) for a “Dual Mode LCD Backlight” which employs a novel dichroic filtering design to create a single rail, night vision compatible backlight.

7. I have a bachelor’s degree in Physics from the State University of New York at Plattsburgh and a bachelor of science degree in mechanical engineering from Arizona State University. I have additionally studied optics at the graduate level at the University of Oregon and have studied liquid crystal display technology at Kent State University (professional short courses).

III. SCOPE OF ASSIGNMENT

8. I have been retained to opine on the patentability of the claims in U.S. Patent No. 5,779,334 (“the ‘334 patent”), and on the claims proposed to be added to the ‘334 patent.

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