#### UNITED STATES PATENT AND TRADEMARK OFFICE

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## BEFORE THE PATENT TRIAL AND APPEAL BOARD

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JIAWEI TECHNOLOGY (HK) LTD., JIAWEI TECHNOLOGY (USA) LTD., SHENZHEN JIAWEI PHOTOVOLTAIC LIGHTING CO., LTD., ATICO INTERNATIONAL (ASIA) LTD., ATICO INTERNATIONAL USA, INC., CHIEN LUEN INDUSTRIES CO., LTD., INC. (SHIEN LUEN FLORIDA), CHIEN LUEN INDUSTRIES CO., LTD., INC. (SHIEN LUEN CHINA), COLEMAN CABLE, LLC, NATURE'S MARK, RITE AID CORP., SMART SOLAR, INC., AND TEST RITE PRODUCTS CORP.

Petitioner

V.

SIMON NICHOLAS RICHMOND, Patent owner

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Case IPR2014-00938 Patent 7,429,827

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PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE



## TABLE OF CONTENTS

I.	INT	TRODUCTION	
II.	THE LEVEL OF SKILL IN THE ART		2
	A.	Petitioner Correctly Assessed the Level of Ordinary Skill in the Art.	2
	B.	Dr. Shackle is Qualified to Testify	7
III.	CLAIM CONSTRUCTION		
	A.	"varying colour"	9
	B.	"lamp," "desired colour," and "securing means"	10
	C.	"switch being accessible by the user"	11
IV.	CLAIMS 24-30 AND 35 ARE UNPATENTABLE		
	A.	Grounds 1 and 2: Claims 24-26, 27-29, and 35 are obvious in view of Chliwnyj and Pu.	14
	1.	Pu discloses a "switch being accessible to the user" of claims 27-29 and 35.	14
	2.	Chliwnyj and Pu disclose the "selection switch to select a desired lighting effect" of claims 24-26.	19
	В.	Ground 3: It would have been obvious for Chliwnyj to include "three lamps comprising a diode that emits red light, a diode that emits blue light and a diode that emits green light" in view of Lau because Chliwnyj may use "a number of suitable colors"	21
V.		PO FAILED TO PROFFER ANY RELEVANT SECONDARY CONSIDERATIONS	
VI	CONCLUSION		25



#### I. INTRODUCTION

Petitioners respectfully submit that the Board should find that all of the instituted claims are obvious in view of the cited references. Patent Owner's ("PO's") arguments to the contrary are factually and legally incorrect.

First, as with IPR2014-00936 and IPR2014-00935, PO ignores the majority of the prior arts' disclosure. For example, PO's almost exclusive focus on the eternal flame embodiment of Chliwnyj leads to the incorrect conclusion that a person of ordinary skill in the art at the time of the alleged invention (a "POSA") would not have combined Chliwnyj with Pu because a user would not be expected to interact with an eternal flame. But Chliwnyj's disclosure is broad, including embodiments that specifically teach user interaction. PO's argument, therefore, must be rejected.

Second, PO argues it would not have been known to substitute red, green, and blue LEDs in Chliwnyj because Chliwnyj's simulated flame is limited to yellow/orange. This argument fails because Chliwnyj discloses the use of a "plurality of colors," that LEDs are available in a "number of suitable colors," and that the invention is not limited to any particular LEDs or electric lamps. Dr. Ducharme agrees that Chliwnyj did not rule out any color. Duchm. Depo., (Ex. 1046), at 138:13-24. PO makes a related argument that the results of substituting red, green, and blue LEDs in Chliwnyj would have been unpredictable. But this



argument fails because Chliwnyj's waveforms are of a constant shape. They are stored in the microprocessor and do not depend on color. Utilizing different LED colors, therefore, will simply result in a differently colored flame, the color of which would have been predictable based upon known color relationships.

Finally, PO's attempt to define the level of ordinary skill in the art such that a POSA would be little more than an automaton should be rejected. As set forth below and in the accompanying Supplemental Declaration of Dr. Peter Shackle ("Shackle II"), the level of ordinary skill in the art is higher than PO suggests.

## II. THE LEVEL OF SKILL IN THE ART

PO argues that Petitioner has incorrectly assessed the level of skill in the art and that Petitioner's expert (Dr. Shackle) is unqualified to testify because he allegedly lacks certain qualifications and allegedly employed "retrospective" analysis, which PO equates with impermissible hindsight. PO Resp. at 10-15; Duchm. Decl. (Ex. 2021), at ¶ 32-66. PO is incorrect.

## A. Petitioner Correctly Assessed the Level of Ordinary Skill in the Art.

Courts may consider many factors in accessing the level of skill in the pertinent art, including (i) the kinds of problems existing in the art, (ii) the known solutions to those problems, (iii) the rate at which new innovations are made in the field, (iv) the sophistication of the technology, and (v) the educational level of active workers working in the field. *Custom Accessories, Inc. v. Jeffrey-Allan* 



*Indus., Inc.*, 807 F.2d 955, 962-63 (Fed. Cir. 1986). The importance of each factor, to the extent it is even present, will vary from case to case. *Id*.

Applying these factors to this case, Petitioner's proffered level of skill in the art should be adopted. First, the '827 patent describes disadvantages in the prior art relating to the "difficulty in adjusting the various lighting functions and not producing a uniform desired colour [of light] when required to do so." Ex. 1001, 1:25-28. These problems relate to specifics of the electronic circuitry. Shackle II (Ex. 1047), at ¶18; see also Declaration of Peter Shackle ("Shackle I") (Ex. 1002), at ¶¶ 66-69. Indeed, although the '827 patent discloses both mechanical and electrical elements, a large part of the specification relates to describing the particulars of electronic circuitry (e.g., the power supply circuit, the boost-up circuit, and the light circuit). See Ex. 1001, 5:7-7:65; Shackle II (Ex. 1047), at ¶ 18. The patent's description also includes selected component values for certain resistors, inductors, and capacitors. Id. at 5:30-6:27; Shackle II, at ¶ 18.

Patents are written to describe to one of ordinary skill in the art how to build the inventions without undue experimentation. *In re Nelson*, 280 F.2d 172, 181 (1960). A degreed electrical engineer or physicist (or the equivalent) with industrial and circuit design experience would be able to understand the patent's descriptions and drawings (particularly Figure 9). Shackle II (Ex. 1047), at ¶¶ 19, 29; Shackle Decl. (Ex. 1002), at ¶ 36. But PO's POSA would not have been able to



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