APPENDIX 2

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TCL INDUSTRIES HOLDINGS CO. AND HISENSE CO., LTD..
Petitioners,

v.

PARKERVISION, INC.
Patent Owner

Case No. IPR2021-

DECLARATION OF MATTHEW B. SHOEMAKE, PH.D.

REGARDING U.S. PATENT NO. 7,110,444

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I, Matthew B. Shoemake, Ph.D., do hereby declare and state, that all statements are made herein of my own knowledge are true and that all statements made on information and belief are believed to be true. I am over the age of 21 and am competent to make this declaration. These statements were made with the knowledge that willful false statements are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: May 20, 2021

_____

Matthew B. Shoemake, Ph.D.

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(a) Element [2-preamble]: "A wireless modem apparatus, comprising" 54

(b) Element [2A]: "a receiver for frequency down-converting an input signal including" 56

(c) Element [2B]: "a first frequency down-conversion module to down-convert the input signal, wherein said first frequency down-conversion module down-converts said input signal according to a first control signal and outputs a first down-converted signal" 57

(d) Element [2C]: "a second frequency down-conversion module to down-convert the input signal, wherein said second frequency down-conversion module down-converts said input signal according to a second control signal and outputs a second down-converted signal" 65

(e) Element [2D]: "a subtractor module that subtracts said second down-converted signal from said first down-converted signal and outputs a down-converted signal" 70

(f) Element [2E]: "wherein said first frequency down-conversion module under-samples said input signal according to said first control signal, and" 73

(g) Element [2F]: "said second frequency down-conversion module under-samples said input signal according to said second control signal" 75

2. Independent Claim 3 76

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