UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner

v.

UNILOC 2017 LLC,
Patent Owner

Patent No. 7,012,960

PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 7,012,960

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TABLE OF CONTENTS

I. INTRODUCTION 1

II. MANDATORY NOTICES 2

III. PAYMENT OF FEES 3

IV. GROUNDS FOR STANDING 3

V. PRECISE RELIEF REQUESTED 3

VI. LEVEL OF ORDINARY SKILL 7

VII. THE '960 PATENT 7

A. Overview of the '960 Patent 7

B. Prosecution History of the '960 patent 10

VIII. CLAIM CONSTRUCTION 11

A. "transformed signal[s]" (Claims 1 and 4) and "transformed coefficients" (Claim 1) 12

B. "transformed motion-compensated signal" (Claims 1 and 4) 12

C. "wherein the recursive filtering step is intended to use a recursive filter such as: Rf[i]=(1— .alpha.[i]) (R1[i]+Rmc[i]) . . . is a filter coefficient comprised between 0 and 1;" 13

IX. DETAILED EXPLANATION OF GROUNDS 14

A. Ground 1: *Keesman* and *Neri* Render Obvious Claim 1 14

1. Claim 1 14

B. Ground 2: *Keesman, Neri, and Dubois* Render Obvious Claim 1 55

C. Ground 3: *Keesman* and *Kim* Render Obvious Claims 4 and 5 60

1. Claim 4 60

2. Claim 5 75

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D. Ground 4: *Keesman*, *Kim*, and *Matsumura* Render Obvious Claims 4 and 5 77

1. Claim 4 77

2. Claim 5 81

X. Priority Claims of the '960 Patent 83

XI. CONCLUSION 85

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LIST OF EXHIBITS

Ex. 1001	U.S. Patent No. 7,012,960 to Bourge *et al*.
Ex. 1002	Declaration of Jeffrey J. Rodriguez, Ph.D.
Ex. 1003	Curriculum Vitae of Jeffrey J. Rodriguez, Ph.D.
Ex. 1004	Prosecution History of U.S. Patent No. 7,012,960
Ex. 1005	Keesman *et al.* "Transcoding of MPEG bitstreams," Signal Processing: Image Communication, Vol. 8, No. 6 (September 1996)
Ex. 1006	Neri *et al.* "Inter-block filtering and downsampling in DCT domain," Signal Processing: Image Communication, Vol. 6, No. 4 (August 1994)
Ex. 1007	Dubois *et al.*, "Noise Reduction in Image Sequences Using Motion-Compensated Temporal Filtering," IEEE Transactions on Communications, Vol. Com-32, No. 7 (July 1984)
Ex. 1008	U.S. Patent No. 6,249,549 to Kim
Ex. 1009	U.S. Patent No. 6,792,045 to Matsumura *et al*.
Ex. 1010	Excerpts from *Smith*, The Scientist and Engineer's Guide to Digital Signal Processing (1997)
Ex. 1011	Opening Claim Construction Brief of Uniloc 2017 in *Uniloc 2017 LLC v. Google LLC*, Case No. 2:18-CV-551-JRG (E.D. Tex. Jan. 23, 2020), ECF No. 121
Ex. 1012	Defendant Google LLC's Responsive Claim Construction Brief in *Uniloc 2017 LLC v. Google LLC*, Case No. 2:18-CV-551-JRG (E.D. Tex. Jan. 23, 2020), ECF No. 130
Ex. 1013	U.S. Patent No. 6,456,663 to Kim
Ex. 1014	U.S. Patent No. 5,428,456 to Parulski et al.
Ex. 1015	European Application No. 00402939
Ex. 1016	European Application No. 01400588

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Ex. 1017	Declaration of Ingrid Hsieh-Yee, Ph.D.
Ex. 1018	Mitchell *et al.*, MPEG Video Compression Standard, Chapman & Hall (1996)

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