

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INTEL CORPORATION and XILINX, INC.,¹,

Petitioners

v.

FG SRC LLC,

Patent Owner

CASE NO.: IPR2020-01449

PATENT NO. 7,149,867

**DECLARATION OF STANLEY SHANFIELD, PH.D.,
IN SUPPORT OF PETITIONER'S OPPOSITION TO PATENT OWNER'S
REVISED MOTION TO AMEND**

Mail Stop **PATENT BOARD**
Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

¹ Xilinx, Inc. filed a motion for joinder and petition in IPR2021-00633, which were granted, and, therefore, has been joined as petitioner in this proceeding

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I. INTRODUCTION

1. My name is Stanley Shanfield Ph.D., and I am a Technical Director at Draper Laboratory in Cambridge, Massachusetts. I have been retained to prepare this declaration as an expert witness on behalf of Petitioner Intel Corporation ("Intel" or "Petitioner"). In this report, I provide my opinions concerning the scope and patentability of the amended claims submitted in the Patent Owner's motion to amend the claims of U.S. Patent No. 7,155,867 ("867 patent"). I also provide herein the technical bases for these opinions, as appropriate. This declaration contains statements of my opinions formed to date, and the bases and rationale for these opinions. I may offer additional opinions based on further review of materials presented throughout the course of this proceeding, including any additional opinions and/or testimony of Patent Owner's expert witnesses.

2. For my efforts in connection with the preparation of this declaration, I have been compensated at my usual and customary rate for this type of consulting activity. My compensation is in no way contingent on the substance of my opinions or the results of this or any other proceedings relating to the '867 patent.

A. Educational and Work Background

3. My educational background and qualifications are set forth generally in my prior declaration supporting Intel's Petition for IPR (*see* EX1006 ¶¶ 3-16) and in my *curriculum vitae* which was submitted as **Attachment A** thereto.

B. Materials Considered

4. I have considered information in forming my opinions in this declaration:

- The '867 patent and its prosecution file history (EX1001, EX1002);
 - Intel's Petition for IPR (Paper No. 1);
 - X. Zhang et al., Architectural Adaptation of Application-Specific Locality Optimizations, IEEE (1997) (EX1003);
 - R. Gupta, Architectural Adaptation in AMRM Machines, IEEE (2000) (EX1004);
 - Chien and R. Gupta, MORPH: A System for Robust Higher Performance Using Customization," IEEE (1996) (EX1005);
 - My initial declaration submitted with Intel's Petition (EX1006);
 - The Board's Institution Decision in this proceeding (Paper 13);
 - Patent Owner's Revised Motion to Amend the Claims (Paper 41);
 - Declaration of William Mangione-Smith, Ph.D., in Support of Patent Owner's Revised Motion to Amend the Claims (EX2030);
 - U.S. Patent No. 7,155,602 to Poznanovic ("Poznanovic" – EX1046);
- and
- Any other materials referenced in this declaration.

II. LEVEL OF ORDINARY SKILL IN THE ART

5. My opinions in this declaration are based on the knowledge of a person of ordinary skill in the art ("POSA") at the time of the '867 patent. My determination of the level of ordinary skill in the art is set forth in my prior declaration supporting Intel's Petition. *See* EX1006 ¶¶ 66-67.

III. THE ART RENDERS OBVIOUS A RECONFIGURABLE PROCESSOR THAT OPERATES INDEPENDENT OF AND IN PARALLEL WITH A CONVENTIONAL MICROPROCESSOR

6. My testimony in this declaration is limited to only addressing the obviousness of the new "wherein the reconfigurable processor operates independent of and in parallel with a conventional microprocessor" amendments proposed in the Patent Owner's revised motion to amend the claims in this proceeding, and even then only to the extent expressly addressed below. In this declaration I do not opine or offer testimony concerning any other claim limitation, or aspects or features of the '867 patent or the prior art, which I have addressed in prior declarations in this proceeding.

7. I understand that the Patent Owner has submitted proposed amended claims 20, 21, 28 and 32 that each recite "wherein the reconfigurable processor operates independent of and in parallel with a conventional microprocessor," or similar language, and that the Petitioner asserts this limitation is not supported anywhere in the '867 patent specification. I have reviewed the '867 patent

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