### UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION,

Petitioner,

v.

DIRECTSTREAM, LLC, Patent Owner.

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IPR2018-01594 (Patent 6,434,687 B1)

IPR2018-01601 (Patent 7,225,324 B2)

IPR2018-01602 (Patent 7,225,324 B2)

IPR2018-01603 (Patent 7,225,324 B2)

IPR2018-01605 (Patent 7,620,800 B2)

IPR2018-01606 (Patent 7,620,800 B2)

IPR2018-01607 (Patent 7,620,800 B2)

IPR2018-01599 (Patent 6,076,152)

IPR2018-01600 (Patent 6,247,110 B1)

IPR2018-01604 (Patent 7,421,524 B2)

SUPPLEMENTAL DECLARATION OF DR. HOUMAN HOMAYOUN UNDER 37 CFR §42.64(B)(2)



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### I. PURPOSE OF DECLARATION

- 1. My name is Dr. Houman Homayoun. I have personal knowledge of the facts contained in this declaration, am of legal age, and am otherwise competent to testify.
- 2. I have been retained as an expert by Patent Owner on the patentability of patents owned by DirectStream, LLC ("DirectStream") regarding high-performance reconfigurable computing. I have previously submitted a declaration in co-pending U.S. District court cases against Microsoft and Amazon related to certain claim construction issues.
- 3. It is my understanding that Microsoft has filed and the Board has instituted 10 IPR Petitions (IPR2018-01594, -1599, -1600, -1601, -1602, -1603, -1604, -1605, -1606, -1607) (I understand that the -1601, -1602, and -1603 have been consolidated into one IPR and that the -1605, -1606, and -1607 have been consolidated into one IPR).
- 4. I provided expert opinions in declaration form to support Patent Owner's preliminary responses to the above mentioned IPRs. Specifically, Exhibit 2029 in the -1601 IPR (-1602 IPR and -1603 IPR) and Exhibit 2029 in the -1605 IPR (-1606 IPR and -1607 IPR). I also provided expert opinions in declaration form to support Patent Owner's Patent Owner Responses in the -1594 (EX2095), -1601 (EX2111), -1605 (EX2112), -1599 (EX2104), -1600 (EX2104), and -1604 (EX2102) IPRs.



#### II. MATERIALS REVIEWED AND CONSIDERED

- 5. As I stated in my prior declarations, my opinions are based on my years of education, research, and experience, as well as my review of the IPR petitions, the materials cited by Microsoft in the IPR petitions, and the Board's institution decisions, specifically including the claims, specifications, prosecution histories, and various prior art references submitted during the prosecution of the Patents-in-Suit. In forming my opinion, I have considered the materials I identified in my various reports.
- 6. A listing of key references I independently found were listed in Exhibit B of my reports (see for example, Exhibit B to the -1594 (EX2095), -1601 (EX2111), -1605 (EX2112), -1604 (EX2102), -1599 (EX2104), and -1600 (EX2104) IPRs). Any material I independently searched for and found and/or reviewed and used to support my opinions were specifically mentioned in my opinions and such references were attached to my reports.
- 7. Further and as I previously disclosed, I was also provided deposition testimony from Dr. Harold Stone (two transcripts), Dr. Stephen Trimberger, Dr. Scott Hauck, and the Declarations of Jon Huppenthal and Dr. Tarek El-Ghazawi and the exhibits attached thereto. I also reviewed the declaration of Dr. Steven Guccione related to these IPRs (EX2148 (-1599 and -1600 IPRs), EX2146 (-1604 IPR)). Additional documents provided to me were listed in Exhibit C and attached to the -1594 (EX2095), -1601 (EX2111), -1605 (EX2112), -1604 (EX2102), -1599 (EX2104), and -1600



(EX2104) IPRs. To the extent I relied on any of these materials, I identified them and attached the documents to my report.

8. The materials identified in Exhibits B and C and attached to my reports are the types of facts and data an individual with my experience would utilize to help understand the evidence in these IPRs. The materials identified in Exhibits B and C and attached to my various reports contain reliable facts and data a person with my education and experience would reasonably rely upon to evaluate the patents disclosed in the various IPRs I was asked to offer testimony on. Moreover, the material in Exhibits B and C and attached to my reports are relevant to my opinions as disclosed in my reports and also demonstrate the failure of Microsoft's experts of not considering such materials in their conclusory opinions offered in the various IPRs I was asked to review.

## III. CLOSING MATTERS

- 9. The opinions expressed in this declaration are not exhaustive of my opinions on the patentability of any of the claims in the Patents-in-Suit. Therefore, the fact that I do not address a particular point should not be understood to indicate any agreement on my part that any claim otherwise complies with any patentability requirements.
- 10. I am not an employee of the Patent Owner or any affiliate or subsidiary thereof or any prior owner of the Patents-in-Suit. I also have no direct or indirect financial or other interest of any kind in the underlying litigation, dispute, or outcome



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