IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HULU, LLC; AMAZON.COM, INC., and NETFLIX, INC. Petitioners

v.
REALTIME ADAPTIVE STREAMING LLC,
Patent Owner

Case No. Unassigned Patent 8,934,535

DECLARATION OF JAMES A. STORER, PH.D.



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I, James A. Storer, declare as follows:

- 1. My name is James A. Storer. I am a Professor of Computer Science at Brandeis University and a member of the Brandeis Center for Complex Systems. I have prepared this report as an expert witness retained by Hulu, LLC ("Petitioner"). In this report I give my opinions as to whether certain claims of U.S. Patent No. 8,934,535 ("the '535 Patent") are invalid. I provide technical bases for these opinions as appropriate.
- 2. This report contains statements of my opinions formed to date and the bases and reasons for those opinions. I may offer additional opinions based on further review of materials in this case, including opinions and/or testimony of other expert witnesses. I make this declaration based upon my own personal knowledge and, if called upon to testify, would testify competently to the matters contained herein.

I. <u>BACKGROUND AND QUALIFICATIONS</u>

- 3. I have summarized in this section my educational background, career history, publications, and other relevant qualifications. My full curriculum vitae is attached as Appendix 1 to this declaration.
- 4. I am an expert in the field of computer algorithms, including data communications and network computing, data compression, data and image retrieval, storage and processing of large data sets, and image / video processing. I



have studied, taught, practiced, and researched in the field of Computer Science for over thirty years. Currently, I am Professor of Computer Science at Brandeis University in Waltham, Massachusetts, where I have been on the faculty since 1981.

- 5. I received my Doctor of Philosophy (Ph.D.) degree in the field of Computer Science from Princeton University in 1979. I received my Masters of Arts (M.A.) degree in Computer Science from Princeton University and my Bachelor of Arts (B.A.) degree in Mathematics and Computer Science from Cornell University.
- 6. After receiving my Ph.D. degree, I worked in industry as a researcher at AT&T Bell Laboratories from 1979 to 1981 before joining the faculty of Brandeis University.
- 7. I have been involved in computer science research since 1976. My research has been funded by a variety of governmental agencies, including the National Science Foundation (NSF), National Aeronautics and Space Administration (NASA), and Defense Advanced Research Projects Agency (DARPA). In addition, I have received government Small Business Innovation Research (SBIR) funding, as well as numerous industrial grants.
- 8. I regularly teach courses in software and hardware technology for data compression and communications (including text, images, video, and audio) at both the undergraduate and graduate level, and in my capacity as co-chair of the



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