### UNITED STATES PATENT AND TRADEMARK OFFICE

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## BEFORE THE PATENT TRIAL AND APPEAL BOARD

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DISH NETWORK, L.L.C., Petitioner

v.

BROADBAND ITV, INC., Patent Owner

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Case IPR2020-01627 U.S. Patent No. 10,028,026

DECLARATION OF MICHAEL I. SHAMOS, PH.D., J.D.

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I, Dr. Michael I. Shamos, declare as follows:

## I. INTRODUCTION AND QUALIFICATIONS

- 1. I have been retained by Patent Owner Broadband ITV, Inc.

  ("BBiTV") to provide technical analysis and opinions relating to DISH Network,

  L.L.C.'s Petition for *inter partes* review challenging the validity of claims 1-16

  (the "Challenged Claims") of U.S. Patent No. 10,028,026 ("the '026 Patent" or the Patent") in this proceeding.
- 2. I currently hold the title of Distinguished Career Professor in the School of Computer Science at Carnegie Mellon University in Pittsburgh,
  Pennsylvania. I am a member of two departments in that School, the Institute for Software Research and the Language Technologies Institute. I was a founder and Co-Director of the Institute for eCommerce at Carnegie Mellon from 1998-2004 and from 2004-2018 was Director of the eBusiness Technology graduate program in the Carnegie Mellon University School of Computer Science. Since 2018, I have been Director of the M.S. in Artificial Intelligence and Innovation degree program at Carnegie Mellon. My Curriculum Vitae is attached to this declaration.
- 3. I have an A.B. degree from Princeton University in Physics, an M.A. degree from Vassar College in Physics, an M.S. degree from American University in Technology of Management, an M.S. degree from Yale University in Computer



Science, an M. Phil. from Yale University in Computer Science, a Ph.D. from Yale University in Computer Science, and a J.D. degree from Duquesne University.

- 4. I have taught graduate courses at Carnegie Mellon in Electronic Commerce, including eCommerce Technology, Electronic Payment Systems, Electronic Voting, Internet of Things, Electronic Payment Systems and eCommerce Law and Regulation, as well as Analysis of Algorithms. Since 2007, I have taught an annual course in Law of Computer Technology. I currently also teach Artificial Intelligence and Future Markets. Since 2001, I have been a Visiting Professor at the University of Hong Kong, where I teach an annual course in Electronic Payment Systems.
- 5. I am also the Director of Carnegie Mellon's graduate degree program in eBusiness Technology and a faculty member in the Privacy Engineering degree program at Carnegie Mellon. My course on Law of Computer Technology is required for all students in that program.
- 6. From 1979-1987, I was the founder and president of two computer software development companies in Pittsburgh, Pennsylvania, Unilogic, Ltd. and Lexeme Corporation.
- 7. I am an attorney admitted to practice in Pennsylvania and have been admitted to the Bar of the U.S. Patent and Trademark Office since 1981. I have



been asked to render opinions in this declaration as a technical expert. I have not been asked to offer any opinions on patent law in this proceeding.

- 8. I have previously served as an expert in over 270 cases concerning computer technology. In particular, I have been involved in multiple cases involving television distribution systems and interactive program guides.
- 9. The statements made and opinions provided in this Declaration are based on my own personal knowledge and, if called as a witness, I could and would testify consistent with the following.

### II. MATERIALS CONSIDERED

- 10. I have been asked by counsel for Patent Owner to address Petitioner's assertions that certain combinations or prior art references would have rendered the Challenged Claims obvious. I have also been asked to opine whether claims 1-9 of the Patent are supported by U.S. Application No. 10/909,192 (the "'192 Application"), which was filed on July 30, 2004, is now U.S. Patent 7,590,997, and on which the '026 Patent relies in part for priority. I have further been asked to examine various inventor declarations and documents to determine the date on which the subject matter of claims 1-9 was conceived.
- 11. I have reviewed the following documents in forming the opinions expressed in this Declaration:
  - All papers and exhibits filed up to and including this date in this IPR.



- Gordon et al. U.S. Patent 6,253,375, which is incorporated by reference in Son et al. U.S. Patent 7,159,233 (EX2171).
- U.S. Patent Applications 10/909,192 and 15/192,598 (EX2062 and EX2172).
- U.S. Patent Application Publication 2002/0066106 (EX2069).
- U.S. Provisional Patent Applications 60/253,350, 60/253,369 and 60/253,488 (EX2173, EX2174, and EX2175).
- April 30, 2021 Transcript of the Deposition of Samuel H. Russ (EX2039).
- 12. I have also relied on my education, skill, training, and experience in the relevant fields of technology, particularly television distributions and program guide systems, in forming my opinions. I have further considered the viewpoint of a person of ordinary skill in the art at the time of invention of the '026 patent ("POSITA"). I provide my opinion as to the proper level of skill of a POSITA below in response to ¶¶ 94-97 of the Russ Declaration (EX1002).
- 13. I reserve the right to supplement my opinions as expressed in this Declaration to address any new information obtained in the course of this proceeding, or based on any new positions taken by Petitioner.



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