

EXHIBIT 5

DECLARATION OF MELODY DRUMMOND HANSEN IN SUPPORT OF DEFENDANT'S
RESPONSIVE CLAIM CONSTRUCTION BRIEF

Case No. 5:15-CV-02008-EJD

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20 **UNITED STATES DISTRICT COURT**
21 **NORTHERN DISTRICT OF CALIFORNIA**
22 **SAN JOSE**

23 OpenTV, Inc., Nagravision, S.A., and Nagra
24 France S.A.S.,

25 Plaintiffs,

26 v.

27 Apple Inc.,

28 Defendant.

Case No. 5:15-cv-02008-EJD

**DECLARATION OF SCOTT
BRADNER IN SUPPORT OF APPLE'S
CLAIM CONSTRUCTION BRIEF**

1 I, Scott Bradner, hereby declare as follows:

2 **I. INTRODUCTION**

- 3 1. I have been retained by Apple Corporation to serve as an expert in the proceeding
4 listed above. My billing rate for this consulting is my normal hourly consulting fee of
5 \$425 per hour. I am also reimbursed for my travel expenses, if any. My compensation
6 does not depend on the substance of my opinions or on the outcome of this
7 proceeding.
8 2. I have prepared this declaration in support of Apple Inc.'s responsive claim
9 construction brief.

10 **II. QUALIFICATIONS**

- 11 3. My background and expertise that qualify me as an expert in the technical issues in
12 this proceeding are as follows:

13 **A. Employment**

- 14 4. I have worked at Harvard University since 1966. I am currently a Senior Technology
15 Consultant in the office of the Harvard University Chief Technology Officer (CTO)
16 where I work primarily on identity management projects. Before joining the Harvard
17 CTO's office I was the Harvard University Technology Security Officer (UTSO) from
18 2008 to 2012.
19 5. My jobs at Harvard have been technical. For the first half of my career I was a
20 programmer then a system manager. In the mid-1980s I became interested in data
21 networking and wound up installing and helping run Harvard's first inter-building
22 fiber Ethernet data network in early 1986. I co-founded the New England regional
23 Internet service provider (ISP) NEARnet in 1989 and chaired its technical committee
24 until it was handed off to a larger ISP in 1995. I also designed and helped install an
25 ISP serving the Longwood medical area network in Boston in 1991 and chaired the its
26 technical committee from 1991 to 1995. I also designed the expansion of the Harvard
27 data network from 13 buildings in 1990 to almost 100 buildings in 1993.
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6. In addition to the network related tasks I also developed and deployed network-based applications including a single sign-on service that was used from the mid-1990s until two years ago. As a Senior Technical Consultant, first at the Office for Information Technology then, starting in 1996, in the office of the Assistant Provost for Information Systems, my job was to advise the Harvard information technology groups on the applications of new technology at the University. Finally, from 1988 to 1999 I created and managed the Harvard Network Device Test Lab, the definitive performance testing laboratory for evaluating the performance of network equipment such as switches and routers.
 7. I currently teach courses on “*Technology, Security, Privacy, and the Realities of the Cyber World*” at the Harvard University Extension School and have supervised masters and Ph.D. theses for students in the Extension School and the University. In the past I have taught classes for undergraduate and graduate students at Harvard University and multi-day tutorials at the Interop trade show and at a number of technology companies including IBM and Nortel.
 8. I have also served on the technical advisory boards of about two-dozen companies in various technology fields and on the board of a telephony startup company.

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B. Publications

9. I have authored or co-authored 4 books and over 90 articles or other publications in peer-reviewed journals, conference proceedings, popular publications, monographs and standards organizations. These publications span a range of topics including analyzing network hardware, Internet technology, technology policy and standards processes. In addition, between 1992 and 2013, I wrote a regular column in the technical journal Network World, which was read around the world.

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C. The Internet Engineering Task Force (IETF)

10. The Internet Engineering Task Force (IETF) is a primary standards creation body for the Internet. The work of the IETF is conducted in Working Groups and IETF

1 Working Groups are organized into Areas. Each of the technical areas in the IETF is
2 managed by one or two Area Directors. Relevant to this case, from 1993 to 2003 I
3 served as one of the members of the Internet Engineering Steering Group (IESG), the
4 IETF's standards approval and general management committee. At various times I
5 served as the co-director of the IETF's Operational Requirements, IP Next Generation,
6 Transport and Sub-IP areas.

- 7
- 8 11. As a member of the IESG, my responsibility included reviewing technical documents
9 produced by IETF working groups as part of the IETF's standards approval process,
10 including Internet applications such as multi-media transport over the Internet. In
11 early 1996 I was a co-director in both the IETF Operational Requirements Area and
12 the IP Next Generation areas. As an area director I was a member of the IESG. As
13 an IESG member my responsibility included reviewing documents that IETF working
14 groups requested be published as IETF standards.

15 **D. Activities During the Relevant Time Frame**

- 16 12. As described above, in addition to my work in the IETF, in early 1996 when the
17 application that led to the '736 patent was filed, I was a Senior Technical Consultant in
18 the office of the Assistant Provost for Information Systems, Harvard University where
19 I was involved in the design and operation of the Harvard data network and advising
20 Harvard IT management on new technology. I was also teaching courses including
21 *Advanced Topics in Data Networking Protocols and Network Architecture* at the
22 Harvard University Extension School, and on *Designing, Building and Managing*
23 *Switch and Router-based Data Networks* for the Networld+Interop conference at
24 various locations around the world.
- 25 13. A detailed record of my professional qualifications, including a list of publications,
26 awards, and professional activities, is set forth in my curriculum vitae attached to this
27 report as Attachment A.
28

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