Gitlin's concern. Under Apple's proposed construction, multiple symbols could still be combined into a "super-symbol" within a sequence of such "super-symbols." Thus, "in a sequence" is extraneous language that does not solve the alleged ambiguity identified by Dr. Gitlin in his declaration.

3.) Plain and ordinary meaning is correct

39. In contrast, Samsung's plain meaning definition, "representing a number of bits specified according to the modulation technique," addresses Dr. Gitlin's concern, because the length of a symbol is "specified according to the modulation technique." Modulation techniques are discussed in the '792 patent claims and specification, and these techniques would have been known by one of ordinary skill in the art. Dr. Gitlin raises an ambiguity that simply does not exist under the plain and ordinary meaning of "symbol." No construction of "symbol" is necessary to alter this plain meaning.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on November 28, 2011, at Los Angeles, California.

Richard Wesel

EXHIBIT A

TO DECLARATION OF RICHARD WESEL IN SUPPORT OF SAMSUNG'S PROPOSED CLAIM CONSTRUCTION FOR U.S. PATENT NO. 7,200,792

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RICHARD DALE WESEL

EDUCATION

1991 – 1996 **Stanford University**, Stanford, CA
Ph.D. in Electrical Engineering
Dissertation: *Trellis Code Design for Correlated Fading and Achievable Rates for Tomlinson-Harashima Precoding.*

1984 – 1989 **Massachusetts Institute of Tech.**, Cambridge, MA
S. M. and S. B. in Electrical Engineering
Dissertation: *Adaptive Equalization for Modem Constellation Identification.*

EMPLOYMENT

1996 – present **University of California, Los Angeles**, Los Angeles, CA

Associate Dean of Academic and Student Affairs for the Henry Samueli School of Engineering and Applied Science since July 2007

Professor of Electrical Engineering since July 2006

Associate Professor of Electrical Engineering 2002-2006

Assistant Professor of Electrical Engineering 1996-2001

1992-present **Various Firms**, CA
Consultant to various firms including Xerox PARC, Elantec, Metricom, Townsend and Townsend and Crew, Clarity Wireless (now part of Cisco), Kyocera Wireless Corporation, Latham & Watkins, Aktino Corporation, Fulbright & Jaworski, McAndrews, Held, & Malloy, Weil Gotshcal & Manges, Kirkland & Ellis, Townsend and Townsend and Crew, Kilpatrick Townsend & Stockton.

1991 – 1996 **Stanford University**, Stanford, CA
Research Assistant and Teaching Assistant.

1989 – 1991 **AT&T Bell Laboratories**, Holmdel, NJ

Member of Technical Staff. 1989-1991. Also at AT&T as MTS during summer 1994 and an intern 1986-1989.

TEACHING RESPONSIBILITIES

Courses taught: EE131A Probability, EE132A Communications Systems, EE231A Information Theory, EE232A Stochastic Processes, and EE231E Channel Coding
Winner 2000 TRW Excellence in Teaching Award

AWARDS

- Selected for the National Academy of Engineering Frontiers of Engineering Program
- TRW Excellence in Teaching Award (UCLA School of Engineering)
- Okawa Foundation Award for Excellence in Telecomm. Research
- National Science Foundation CAREER Award
- AT&T Foundation Ph.D. Fellow.
- IEEE Senior Member, Tau Beta Pi MIT chapter president 1987-1988, Etta Kappa Nu, Sigma Xi, National Merit Scholar.

GRADUATED PH.D. STUDENTS

1. Christina Fragouli, Ph.D. Sept. 2000, Dissertation: *Turbo Code Design for High Spectral Efficiency,* 2000-2001 UCLA EE Dept**. Ph.D. Student of the Year Award.** FNS Assistant Professor at EPFL.
2. Christos Komninakis, Ph.D. Dec. 2000, Dissertation: *Joint Channel Estimation and Decoding for Wireless Channels*, AWR Corp., El Segundo, CA.
3. Xueting Liu, Ph.D. Dec. 2000, Dissertation: *Trellis Code Design for Periodic Erasures and Adaptive Coded, Modulation Schemes for Time-Varying Channels*, Nokia, San Diego, CA.
4. Wei Shi, Ph.D. Dec. 2000, Dissertation: *New Results in Wireless Communications*, Qualcomm, San Diego, CA.
5. Tom Sun, Ph.D. Dec. 2002, Dissertation: *Error Protection Techniques for Source and Channel Coding*, Qualcomm, San Diego, CA.
6. Chris Jones, Ph.D. Dec. 2003, Dissertation: *Constructions, applications, and implementations of low-density parity-check codes,* Jet Propulsion Laboratory, Pasadena, CA
7. Adina Matache, Ph. D. June 2004, Dissertation: *Coding Techniques for High Data Rates in Wireless Multiple-Input Multiple-Output Communications*, Marvell, San Jose, CA
8. Cenk Kose,Ph.D. Dec. 2004, Dissertation*: Universal trellis codes and concatenated trellis-coded modulations for the compound linear vector Gaussian channel,* Conexant, San Diego, CA
9. Aditya Ramamoorthy, June 2005, *Generalized ACE Codes and Theoretic Results in Network Coding*, Assistant Profesor at Iowa State University starting Fall 2006
10. Jun Shi, Ph.D. Sept. 2005, Dissertation: *Universal Channel Codes and Trellis State-Diagram Reduction*

11. Wen-Yen Weng, Ph.D. March 2007, Dissertation: *Universal Serially Concatenated Trellis Coded Modulations and Rate-Compatible High-Rate LDPC Codes*
12. Esteban Valles (Primary Advisor John Villasenor), Ph.D. March 2007, Dissertation: *Timing Recovery Using Soft Information Feedback and Efficiency of Array Codes*
13. Andres Vila Casado, Ph.D. December 2007, Dissertation: *Improving LDPC Decoders: Informed Dynamic Message-Passing Scheduling and Multiple-Rate Code Design*
14. Herwin Chan (Primary Advisor Ingrid Verbauwhede), Ph.D. December 2007, Dissertation: *Accelerating Applications Through Cross-Layer Co-Design*
15. Miguel Griot, Ph.D. Sept. 2008, Dissertation: *Nonlinear Codes for Multiple Access to Binary Channels and Higher-Order Modulations over the AWGN Channel*
16. Bike Xie, Ph.D. June 2010, Dissertation: *Encoding for Degraded Broadcast Channels and Resource Allocation for content Distribution in Peer-To-Peer Networks*

PROFESSIONAL ACTIVITIES

- **Associate Editor**, *IEEE Transactions on Communications* 1999-2005.
- **Technical Program Committee Member,** regularly for *Globecom* and *ICC*.
- **Technical Program Chair**, *Communication Theory Symposium at Globecom 2002*.
- **Organizer and Session Chair** for Special Session on Concatenated codes and iterative decoding at the *2001 Asilomar Conf. on Signals, Systems, and Computers.*
- **Organizer and Session Chair** for Special Session on Communication over Time Varying Channels at the *1999 Asilomar Conf. on Signals, Systems, and Computers.*
- **Session Organizer and Chair** for Communication Theory Symposium at the 2001 International Conference on Communications.
- **Panel member** for three National Science Foundation Proposal Review Panels.
- **Organizer and lecturer** for UCLA Extension course on Error Control Coding (annually since 2000). Received an award for being among the top 10% of UCLA extension lecturers.
- **Instructor** for 1997 UCLA Extension course on wireless multimedia communications.
- **Invited speaker** 1998 and 2000 *IEEE Communication Theory Workshops.*
- **Invited speaker** Office of Naval Research, Naval Research Labs 1998 Turbo Codes Workshop.
- **Invited speaker** 1998 DARPA GloMo workshop on emerging technologies for hand-held wireless devices in military communication.
- **Invited speaker** at various universities and companies including Stanford, Berkeley, U.C. San Diego, the Ohio State University, University of Arizona, the Johns Hopkins University, Cornell, Telia Research, Lulea, Sweden, Lucent, Boeing, Xetron, Texas Instruments, Conexant, and Microsoft Research.
- **Reviewer** for various IEEE conferences and journals. Regularly reviewing submissions to Trans. on Information Theory, Trans. On Communications, Journal on Selected Areas of Communications, Communications Letters, Globecom, and International Conference on Communications, 1994-present.

ACADEMIC SERVICE

- **Member of the Executive Enrollment Management Group**

  October 2011-present

- **Member of the Undergraduate Non-Resident Implementation Task Force**

  August 2010 – July 2011

- **Member of UCLA Undergraduate Council** July 2006- July 2008.

- **Member of the Committee on Undergraduate Admissions and Relations with Schools** July 2006- July 2008

- **Electrical Engineering Department Vice Chair for Undergraduate Affairs** July 2005 – July 2007. Successfully managed the 2006 ABET Accreditation visit.

- **Member of the School of Engineering Faculty Executive Committee** 2003-2006.

- **Chair of the Electrical Engineering Department Courses and Curriculum Committee** 2003-2005.

- **Chair of the Communications Major Field** in the Electrical Engineering Department at the University of California, Los Angeles, 1999-2004.

- **Chair of the Cubicle Allocation Committee** for the Electrical Engineering Department at UCLA, managing the allocation of 150 student cubicles among approximately 20 professors who share this space, 1998-2005.

- **Chair of 2002 Annual Research Review** (annual departmental research symposium). Also Vice Chair of 2001 Annual Research Review.

- **Member of 2001 UCLA EE Annual Report Committee.**

- **Elected Member of the Legislative Assembly** of the UCLA Academic Senate, 1997-2001.

- **Chair for quarterly Seminar Series** in Signals and Systems. Established this seminar series in spring 1997. Recruit a professor each quarter to organize speakers for the series. Personally organized speakers for four of these quarters.

- **Local Exhibits Chair,** 1997 UCLA EE Research Symposium

PUBLISHED/ACCEPTED JOURNAL PUBLICATIONS

1. M. Griot, A. I. Vila Casado, W.-Y. Weng, H. Chan and R. D. Wesel," Nonlinear Trellis Codes for Binary-Input Binary-Output Multiple Access Channels With Single-User Decoding," Accepted in IEEE Transactions on Communications.
2. T. A. Courtade and R. D. Wesel," Optimal Allocation of Redundancy Between Packet-Level Erasure Coding and Physical-Layer Channel Coding in Fading Channels," Transactions on Communications, Vol. 59, No. 8, pp. 2101-2109, August 2011.
3. A. I. Vila Casado, M. Griot, and R. D. Wesel, "LDPC Decoders with Informed Dynamic Scheduling ," IEEE Transactions on Communications, Vol. 58, No. 12, pp 3470-3479, Decembber 2010