T. V. Raman
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Summary

I am an accomplished Computer Scientist with over 8 years of industry experience in advanced technology development. During this time, I have authored 2 books and filed over 20 patents; my work on auditory interfaces was profiled in the September 1996 issue of Scientific American. I have leading edge expertise in auditory interfaces, scripting languages, Internet technologies including Web server applications and Web standards. I participate in numerous W3C working groups and authored Aural CSS (ACSS); in 1996 I wrote the first ACSS implementation. I have been actively participating in defining XML specifications for the next generation WWW including XForms, XML Events, and XHTML+Voice.

Objective

Develop technologies that drive the future of the Web toward eyes-free, ubiquitous information access. Speech is the next natural dimension in user interfaces, and I am developing products that combine speech technologies with the power of the Web to deliver innovative multimodal applications that are available anytime, anywhere.

Education

- **Cornell University**, Ithaca, NY

    - **PhD. Applied Mathematics**:   Aug 1989–Jan 1994.
      Awarded the ACM Doctoral Dissertation Award, 1994.
      Thesis: Audio System For Technical Readings.
      Thesis Adviser: Prof. David Gries, Computer Science.
    - **MS Computer Science**:   May 1992.

- **Indian Institute of Technology**, Bombay, India: **MSc Computer Science**: *GPA*: 9.78/10.00   July 1989.

- **University of Pune**, Pune, India: **BA Mathematics**:   May 1987.

Work experience

- IBM Research, Almaden Research Center, San Jose, CA
  Research Staff Member: Conversational Multimodal WWW.

    XForms Authoring multimodal applications for the next generation WWW.
    Handhelds Speech-enabling handheld devices.

- Adobe Systems, Advanced Technology Group, San Jose, CA
  Senior Computer Scientist: Dynamic publishing on the Internet.   Oct 1995–Aug 1999.

    PDF2HTML Developed the PDF to HTML translator bundled with major Web search engines —access.adobe.com.
    XML Metadata Developed an XML-based virtual document architecture to enable cross-application content reuse.

- Digital Equipment Corporation, Cambridge Research Lab, Cambridge, MA
  Research Staff: **Retriever** –A Multimodal Web Interface.   Feb 1994–Oct 1995.

- Intel Corporation, Intel Architecture Labs, Hillsboro, OR
  Summer Associate: Prototyped an email telephony interface.   Jun–Aug 1993.

- Xerox Palo Alto Research Center, Palo Alto, CA
  Summer Associate: Prototyped a new reading machine architecture.   May–Aug 1991.

Selected Awards and Honors

- **Computerworld Award** Smithsonian Institution Emacspeak: Complete Audio Desktop. April 1999.
- **Association of Computing Machinery (ACM)** Doctoral Dissertation Award 1994.
- **Intel Graduate Fellowship** Intel Corporation, CA 1992.
- **Graduate Fellowship** Cornell University. 1989.
- **President's Silver Medal** Indian Institute of Technology, Bombay. 1989.
- **Sir Cusrow Wadia Gold Medal** University of Pune. 1987.
- **Sir Ness Wadia Gold Medal**. 1984.

Books And Patents

1 T. V. Raman. *Auditory User Interfaces —Toward The Speaking Computer*. Kluwer Academic Publishers, August 1997.

2 T. V. Raman. *Audio System For Technical Readings*. LNCS 1410, Springer Verlag, December 1998.

3 T. V. Raman. *Generating audio renderings of digitized works*. Cornell Univ. U.S. Patent 5,572,625, November 1996.

4 T. V. Raman and Jim A. Larson. *Telephone access system*. Intel Corporation. U.S. Patent 5,825,854, October 1998.

5 T. V. Raman. *Multimodal information presentation system*. DEC. U.S. Patent 5,748,186, May 1998.

6 T. V. Raman. *Data stream processing on networks*. Adobe Systems. U.S. Patent 6,134,598, October 17, 2000.

7 T. V. Raman and John Warnock. *Digitized speech and text*. Adobe Systems. U.S. Patent 6,151,576, November 2000.

8 T. V. Raman. *Document description format*. Adobe Systems. U.S. Patent 6,249,794, June 6, 2001.

9 T. V. Raman. *Speech interface for computer application programs* DEC. U.S. Patent 6,289,312, September 11, 2001.

Selected Publications And Articles

1 T. V. Raman. Netsurfing without a monitor. *Scientific American*, March 1997. Special Internet Edition.

2 T. V. Raman. Emacspeak —a speech enabling interface. *Dr. Dobb's Journal*, September 1997.

3 T. V. Raman. User interface —a means to an end. *Dr. Dobb's Journal*, August 1997.

4 Wayt Gibbs. Profile: T. V. raman: Envisioning speech. *Scientific American*, September 1996.

5 Brian Hayes. Speaking of mathematics. *American Scientist*, 84(2), March–April 1996.

6 T. V. Raman. Cascaded speech style sheets. *WWW6 Conference, CA.*, April 1997.

7 T. V. Raman. *Audio System for Technical Readings.* PhD thesis, Cornell University, May 1994.

8 T. V. Raman. Emacspeak –a speech interface. *CHI96*, April 1996.

9 T. V. Raman et al. XForms 1.0 *W3c*, 2001. http://www.w3.org/tr/xforms

10 T. V. Raman et al. An Event Syntax For XML *W3c*, 2001. http://www.w3.org/tr/xml-events

11 T. V. Raman et al. Adding Spoken Interaction To XHTML *W3c*, December, 2001. http://www.w3.org/Submission/2001/13

Other Interests

My favorite hobby is recreational mathematics. I enjoy working on puzzles, especially those that involve an intuitive feel for mathematics. One of the things I enjoyed doing the most in the early eighties was to solve the Rubik's cube faster than anyone else around me, on an average of about thirty seconds! I am also interested in linguistics and can speak about eight languages, including French, German and several Indian languages.