T. V. Raman
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Summary

I am an accomplished Computer Scientist with over 11 years of industry experience in advanced technology development. During this time, I have authored 3 books and filed over 25 patents; my work on auditory interfaces was profiled in the September 1996 issue of Scientific American. I have leading edge expertise in Web standards, auditory interfaces and scripting languages. I participate in numerous W3C working groups and authored Aural CSS (ACSS); in 1996 I wrote the first ACSS implementation. I have led the definition of XML specifications for the next generation WWW including XForms, XML Events, and Compound Document Formats such as X+V.

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 application frameworks that combine speech technologies with the power of the Web to deliver innovative multimodal solutions that are available anytime, anywhere.

Work experience

- Google, Google Research, Mountain View, CA
  Research Scientist. Aug 2005–Present.
- IBM Research, Almaden Research Center, San Jose, CA
  Research Staff Member: Architect, Conversational Multimodal WWW. Aug 1999–Aug 2005.

  XForms Authoring applications for the next generation WWW.

  RDC Reusable Dialog Components to speech-enable the Web.

  X+V Speech-enabling XHTML to create a *multimodal* Web.
- 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.

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. 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.

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, Patents And Software

1 T. V. Raman. *XForms — XML Powered Web Forms*. Addison Wesley, September 2003.

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

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

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

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

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

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

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

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

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

11 T. V. Raman. et al *Dialog management in a multimodal environment* IBM. U.S. Patent 6,839,896, January 4, 2005.

12 T. V. Raman. et al *Web accessibility service apparatus and method* IBM. U.S. Patent 6,922,726, July 21, 2005.

13 T. V. Raman. *Emacspeak — The Complete Audio Desktop*. Open Source Software, May 1995.

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*, October, 2003. http://www.w3.org/tr/xforms

10 T. V. Raman et al. XML Events *W3c*, 2003. 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/tr/xhtml+voice

12 T. V. Raman Collecting Business Critical Information Using XForms *XML Journal*, April, 2003.

Locating My Publications			
ACM	CiteSeer	CSB	DBLP

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! During the last few years, discovering Zome Systems for building complex polyhedra has helped rekindle my interest in polyhedral geometry. I am also interested in linguistics and can speak about eight languages, including French, German and several Indian languages.