Dipl.-Ing. Martin Wolters	**Phone: +1 (831) 685-3981**
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Aptos, CA 95003 (USA)	**http://www.geocities.com/martinwolters**

OBJECTIVE

To apply my research, engineering and management skills in a position related to digital speech and audio signal processing.

SKILLS AND QUALIFICATIONS

- *Programming:* Matlab, C/C++ (embedded and host), Assembler (Motorola 56k, proprietary DSPs), Java
- *Technologies:* Audio compression (lossy and lossless; development and implementation), audio modification (time- and frequency domain), DSP and SoC (System-on-Chip) design, relational databases, collaboration software
- *Management:* Team leading/building, strong communication skills, project management, hard- and software development, prototype development
- *Operating Systems (OS):* GNU/Linux and MS Windows; proprietary realtime OS

EMPLOYMENT HISTORY

Creative Advanced Technology Center *, Scotts Valley, CA (USA)*   **June 2000 -**

Senior DSP Software Engineer Support and consult various groups inside Creative on audio compression and DSP technology. Develop new algorithms and assist in effective technology transfer for product implementations.

- Develop new lossless and lossy compression technology
  as well as audio signal enhancement algorithms.
- Assess and recommend compression technology for Creative products.
- Technical assistance on compression related topics and liaison to FhG, Erlangen.
- Assist VLSI teams during the design phase of custom DSPs and SoCs.

Management support

- Project management in the Audio Research Department.
- Mentor and coach fellow engineers.
- Represent the Audio Research Department in various interdepartmental planning teams.

Telos Systems/Cutting Edge *, Cleveland, OH (USA)*   **April 1998 - Mai 2000**

Research & Development Engineer Responsibilities include defining, managing, and implementing various projects in both hardware and software. Act as liaison to outside companies responsible for circuit board layout and manufacturing.

- *Development of a microphone processor for broadcasting (ToolVox)*
  Product definition, algorithm development, DSP implementation and project management. The product received three awards: BE Radio Pick Hit, Pro Audio Review's PAR Excellence Award, Radio World 2000 "COOL STUFF" Award
- *Design of a real-time multi-DSP algorithm development system*
  Hardware platform, software tools, and integration of the different components.
- Ongoing assistance with various implementations of MPEG hardware encoders.

Fraunhofer Institute for Integrated Circuits IIS-A *, Erlangen (Germany)*   **January - March 1998**

DSP Software Engineer Work on AAC real-time implementation on Motorola DSP56303.

Part time employment during studying   **1990 - 1997**

- *Institute of computer science V at Aachen University of Technology* (Germany)
  Programmer Design, implementation, maintenance and documentation of database software.
- *Self employed*
  Operated a recording studio, designed custom devices for recording studios. Designed and programmed database software, trained users and programmers.
- *Thum + Mahr Audio GmbH* , Mohnheim/Langenfeld (Germany)
  Service technician and assistant in designing analog and digital equipment for broadcast studios.

EDUCATION

Recently
- **August 2001 - :** In-house management training and coaching sessions with Marty Brounstein
- **August 2000 - June 2001:** Certificate Program in Project and Program Management at *UCSC ext*.

Electrical Engineering at Aachen University of Technology (RWTH)   (Germany)   **1992 - 1997**
- **November 1997:** "Diplom Ingenieur (Dipl.Ing)" (German equivalent to MS)
- **May - November 1997: T**hesis "Development of algorithms for detecting and reducing sibilants"
- **October 1996:** Research project with Prof. Dr. habil. Udo Zoelzer at the *TU Hamburg-Harburg* .
- **December 1994 - March 1995:** Internship program at *Telos Systems* , Cleveland, OH (USA)

PUBLICATIONS

Please see my web site for downloadable copies.

- Post-processing and Computation in Parametric and Transform Audio Coders
  AES 22nd International Conference on Virtual, Synthetic and Entertainment Audio,
  Espoo, Finland 2002

On Speech Processing for Broadcasting
- Tuning Your Talent's Voice - Tutorial On Speech Processing For Broadcasting
  NAB Convention , Las Vegas, April 2000
- State of the Art Speech Processing for Broadcasting
  NAB Convention , Las Vegas, April 1999 and Proc. 105th AES Convention , Munich, May 1999

On Sibilants and De-Essing
- The Acoustical Properties of Sibilance and New Basic Approaches for De-essing Recorded Speech
  Tonmeistertagung Karlsruhe (Germany), November 1998
- Adaptive Algorithm for Detecting and Reducing Sibilants in Recorded Speech
  Proc. 104thAES Convention , Amsterdam, Preprint 4677, May 1998
- Reducing Sibilants in Recorded Speech using Psychoacoustic Models
  ICA/ASA-Meeting, Seattle, 1998 (co-author)

On Feedback Delay Networks
- Untersuchungen zur Simulation von diffusem Raumhall mit Hilfe zirkulanter Matrizen
  (Circulant Feedback Delay Networks)
  Research Project (Studienarbeit) with Prof. Dr. habil. Udo Zoelzer at the Dept. Of Telecommunications at TU
  Hamburg-Harburg .

ACTIVITIES AND AFFILIATIONS

- Since Nov. 2000: Linux desktop user, programmer, and advocate.
- Volunteer work for WorldComputerExchange.org.
- Member of the AES and the IEEE. Participated in local activities for the National Engineers Week 2000 and
  as judge at the Santa Cruz County Science Fair (in 2001 and 2002).
- Studying classical piano (20+ years), jazz piano, and trombone with several performance experiences. Long
  distance runner (Marathon) and triathlete.

MISCELLANEOUS

- Born: September 15th 1971
- Place of Birth: Schwalmtal, Waldniel (Germany)
- Parents: Willi Wolters and Dorothee Wolters (van Aaken)
- Schools: 1978 - 1982 Gemeinschaftsgrundschule Waldniel (preschool)
                     1982 - 1991 St. Wolfhelm Gymnasium Waldniel (high school)
                     1991 Abschluß mit allgemeiner Hochschulreife (high school diploma)
- Military Service: 1991-92
- Travelling to Warsaw and Moscow as part of exchange programs