

MAGNUS NILSSON

Lövskogsgatan 19, Apt 78, 413 20 Gothenburg, Sweden

T +46 31 188 498

M +46 732 564 285

E magnus.nilsson@turntable.se



EMPLOYMENT

AWAPATENT AB

Gothenburg, Sweden

Sept. 2004 – Present

Company Information:

Awapatent is one of Europe's leading specialists in patents, trademarks and registered designs. Awapatent has offices in Malmö, Helsingborg, Växjö, Göteborg, Stockholm, Linköping, Jönköping, Norrköping, Söderhamn and Östersund (Sweden), Copenhagen (Denmark), and Munich (Germany). Awapatent has approximately 300 employees.

Position: European Patent Attorney, Business Unit Manager

Job Description:

- Drafts and negotiates nondisclosure agreements, license agreements, and other agreements involving the use, transfer, or ownership of intellectual property.
- Reviews invention disclosure materials, coordinates patent and licensing procedures, and drafts selected patent documents.
- Assists in developing policies and procedures for the treatment of ideas, inventions, copyrightable materials, trademarks, and technology transfer.
- Conducts seminars on such topics as copyrights, patent procedures, trademarks, conflicts of interest, confidentiality, and research fraud.
- Recruiting, budget, managing of business unit (10+ persons). Report to VP.

Work Tools:

Literature and databases related to the subject.

TURNTABLE IT SOLUTIONS

Gothenburg, Sweden

Jan. 2004 – Aug. 2004

Company Information:

Turntable IT Solutions strategy is to provide effective it-solutions in an interesting price range. Clients are in the small to mid range business segment. Turntable IT Solutions develops single and multi user information systems, and interactive web solutions with ASP or PHP, using databases like Interbase, Sybase and MySQL.

Position: Manager and Development Engineer

Job Description:

- Design and implementation of interactive web solutions using ASP and PHP.
- Database and search engine design.
- Business development and marketing.

Work Tools:

PHP, ASP, HTML, DHTML, Interbase, Sybase and MySQL.

MOTOROLA AUSTRALIA PTY. LTD

Sydney, Australia

Feb. 2002 – Dec. 2003

Company Information:

The Motorola Australian Research Centre (MARC) was part of the Motorola Technology Centre, located in Sydney, NSW. The centre was created in 1995 to develop innovative technologies that would drive the company's future business growth. The focus of its work was on technologies for speech, image and video processing, networks and communications systems.

Position: Senior Research Engineer

Job Description:

Research and design work in the field of image and video processing, with main focus on algorithm development and implementation of fast and compact embedded image processing modules.

Project Involvement:

- Design, simulation, implementation/layout and testing of full custom control circuitry for full custom CMOS image sensor.
- Lead and participate in the implementation of first architecture for the second version of CMOS based Smart Surveillance Camera.
- Plan and lead the subjective testing and participate in the objective testing of Smart Surveillance Camera.
- Plan, lead and participation in the initial steps for network integration of Smart Surveillance Camera, including integration with MPEG4 encoding and web-based camera control.
- Initiation and implementation of a novel brightness enhancement.
- Formulation and implementation of a neat hardware friendly solution for gamma and sin/cos function approximation.
- Author and co-author of three conference papers, co-author of three research journal papers.
- Co-inventor of a patent disclosure pursued for filing.
- Research presentation delivered at University of Technology Sydney.
- Research experimentation setup, data gathering and analysis for video quality improvement on CMOS camera platform.

Work Tools:

Visual C++, JAVA, Perl, Matlab, Cadence IC tools, Xilinx FPGA's and tools, Mentor Graphics tools.

ERICSSON MICROWAVE SYSTEMS AB

Gothenburg, Sweden

May 1999 – Feb. 2001

Company Information:

Ericsson Microwave Systems (EMW) is primarily focused on defense customers, with core areas of expertise in microwave technology and high-speed electronics and the research is mainly conducted in these areas. The product development includes design of microwave antennas, transmitters, receivers, software for target tracking, threat evaluation, command & control, communication management and high-speed electronics.

Position: Research Engineer

Job Description:

Research and design in the field of advanced digital design for military high resolution radar systems.

- Research in the field of Radar systems, Direct Digital Synthesis and Fourier Transform (FFT).
- Circuit Board construction and evaluation for high performance military radar systems.
- Analysis of implemented real time system, resulting in technical reports, presentations and recommendations for further research.

Work Tools:

JAVA, C/C++, Matlab, Synopsis RTL tools, Xilinx FPGA's and tools, Mentor Graphics tools.

TERTIARY EDUCATION

MASTER OF COMPUTER AND INFORMATION ENGINEERING

Jun. 2000 – Nov. 2001

Griffith University, Brisbane, QLD, Australia

The postgraduate degree “Master of Computer and Information Engineering” was a combined degree; including 50% research and 50% course work. Research was conducted in the field of Speaker verification and Speaker recognition, and a software program was developed in JAVA for VQ-Speaker verification. Extended research was also conducted in regards to the Fourier transform, and a RTL hardware implementation of a Fast Fourier Transform (FFT) module was made. The majority of the course work was in the area of Advanced Signal Processing.

Master Thesis: “FFT, Realization and Implementation in FPGA” (Part 1) and “Speaker verification in JAVA” (Part 2)

Awarded Griffith Award for Academic Excellence 2001.

BACHELOR OF SCIENCE IN ELECTRONICAL ENGINEERING

Aug. 1996 – May. 2000

Chalmers University of Technology, Gothenburg, Sweden

France Langue, Nice, France

The undergraduate degree “Bachelor of Science in Electronical Engineering” was conducted at Chalmers University of Technology, with major in Microprocessor systems. The studies were also focused on Mathematics, Programming, Digital Signal Processing, VHDL and logical synthesis, EMC and Design for manufacturing. Extended French language training was conducted at France Langue in Nice, France.

Bachelor Thesis: “Realization of a Sigma-Delta Modulator in FPGA”

PUBLICATIONS

Lichman S, Weerasinghe C, Li W, **Nilsson M.** “Motion Area Tracking for a Smart Video Surveillance Camera”. Submitted to IEEE Transaction on Consumer Electronics.

Weerasinghe C, **Nilsson M.**, Twelves S, Zhang X, Li W. “Novel Color Processing Architecture for Complementary Metal Oxide Semiconductor Image Sensors”. Submitted to IEEE Transaction on Consumer Electronics.

Weerasinghe C, **Nilsson M.**, Lichman S, Kharitonenko I. “Digital Zoom Camera with Image Sharpening and Noise Suppression”. IEEE Transactions on Consumer Electronics, Vol. 50, No. 3, August 2004.

Nilsson M. et al. “Design and Implementation of a CMOS Sensor Based Video Camera Incorporating a Combined AWB/AEC Module”. IEEE International Conference on Acoustics, Speech, and Signal Processing 2003 (ICASSP '03).

Hammadou, T., **Nilsson, M.**, Ogunbona, P.: “A 96x64 Intelligent Digital Pixel Array With Extended Binary Stochastic Arithmetic”. IEEE International Symposium on Circuits and Systems 2003 (ISCAS '03).

Hammadou, T., Boussaid, F., **Nilsson, M.**: “Low Cost Single Chip CMOS Camera for Automotive Application”. IEEE International Conference on Consumer Electronics 2002 (ICCE'02). Digest of Technical Papers.

Nilsson, M., Paliwal, K. K.: “Speaker Verification in Software and Hardware”. Microelectronic Engineering Research Conference (MERC'01).

PATENT

Weerasinghe C, Nilsson M, Shi Y. "Variable color saturation in an image capture system". (US 2006/0146193).

EXTERNAL PRESENTATIONS

"Design and Implementation of a CMOS Sensor Based Video Camera Incorporating a Combined AWB/AEC Module". Computer Vision & Image Processing Workshop 2003, University Of Technology Sydney.

"Speaker Verification in Software and Hardware". Microelectronic Engineering Research Conference 2001, Griffith University.

AFFILIATIONS

IEEE Member	<i>Since 2000</i>
IEEE Computer Society	<i>Since 2002</i>
IEEE Signal Processing Society	<i>Since 2002</i>

PROFESSIONAL TRAINING

DeltaPatents EQE Training Program for paper C and D	<i>2007 - 2008</i>
Patskills EQE Training Program for paper A and B	<i>2007</i>
EQE Basic (preparations for the European qualifying examination)	<i>2006 - 2007</i>
Project Manager Training	<i>2006</i>
Trainee program at Awapatent AB	<i>2004 - 2005</i>
Managing Projects in Organizations, The George Washington University	<i>2002</i>
Interview Skills, Motorola University	<i>2002</i>
Responsive Communications, Motorola University	<i>2002</i>
ARM 9 Training, ARM Ltd	<i>2002</i>
Advanced FPGA Implementation, Xilinx Inc.	<i>2002</i>
Xilinx Designing for performance, Xilinx Inc.	<i>2002</i>
Fundamentals of FPGA Design, Xilinx Inc.	<i>2002</i>
FPGA Design FLOW, Mentor Technologies	<i>2002</i>

REFERENCES

References available on request.