

Chatonda J. Mtika, PhD.

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SUMMARY

Proven technical leader with a record of achievement in cellular wireless and machine vision spanning over ten years. Consummate team player, motivator and team builder. Creative thinker and innovator with strong entrepreneurial skills.

**CORE
COMPETENCIES**

- Building and Leading R&D Teams in Startup Environments
 - Charting Technology and Product Roadmaps for the Company
 - Product Development and Management
 - Wireless Communications (DSP, SDR, TDMA, CDMA/CDMA2000, UMTS, EDGE)
 - Embedded Systems Design and Implementation
 - System Architecture Specification
 - Business Development (Business Plans, Grant Proposals, Product Research)
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EXPERIENCE

ALGIS CORPORATION, Burnaby, BC, Canada 2003-2008

Chief Scientist and R&D Manager

Led the development and implementation of the ALGIS automatic lumber grading system, a product with a retail value of over \$1,000,000. Continue to innovate, set research goals, and chart the course for current and future products development. First employee hired; also held positions of Senior Imaging Engineer and Manager, Vision Group.

Responsibilities and achievements:

- Led the development of the ALGIS automatic lumber grading system from inception.
- Developed strategic technology goals and roadmaps for proper market positioning.
- Generated financial scenario analyzes using customer data to demonstrate payback. These analyzes are being used by the sales team to market ALGIS to customers.
- Secured over \$100,000 in government funding through writing grant proposals.
- Designed the overall architecture (H/W and S/W) of the machine, and chose S/W platform and H/W components to use.
- Developed image processing algorithms and state machine for real-time implementation of the machine.
- Devised test procedures and defect tracking system for the machine
- Established operating processes for the company from HR to engineering.
- Built a high performance team of engineers and developers under tight budgetary conditions.

COMWARE, Inc., Rockville, MD, USA

2002-2003

Principal Engineer

Comware, Inc., is a Wireless startup engaged in providing smart antenna solutions to improve throughput of communication networks. Had the following responsibilities:

- Advised CEO on technical matters and assisted in developing company strategy.
- Developed channel capacity simulations to demonstrate throughput improvement with Comwares proprietary channel aggregation strategy.
- Prepared technical proposals and presentations on SDR and smart antennas for funding agents (government, Venture Capitalists, Angel Investors).
- Evaluated and recommended WCDMA network simulation packages.

PHILIPS SEMICONDUCTORS, Vancouver, BC, Canada 2001-2002

Senior DSP Engineer, CDMA/CDMA2000 Handset Development

Received CDMA training/certification and participated in the following projects:

- **IS95 Modulator/Demodulator Verification:** Used SPW, Verilog HDL, Matlab, Logic Analyzers, and Function generator to perform board-level (RF) debugging of the CDMA chipset. Analyzed I&Q data to investigate the poor ρ (rho) value.
- Uncovered a flaw in the patented clock generation algorithm which caused periodic clock jitter.
- **CDMA2000 Forward Power Control (FPC):** Developed high level architecture and wrote firmware (OAK DSP) for FPC implementation.
- Verified the CDMA2000 baseband processor.

MOTOROLA, Germantown, MD, USA 1998-2001

Senior Staff Engineer, Wireless Systems Division

Was part of the development team on the Motorola V60T handset. Had the following responsibilities:

- Generated the Software Architecture for GPRS/EDGE modem implementation using SDR framework.
- Implemented the IS-641A DTX vocoder for the V60T handset. Prevented a potential handset recall by insisting that the phone be retested during interoperability testing after the voice expert had already given it a pass.
- Led a multi-site team on TTY/TDD extension to the IS641A specification and participated in IS641A standards meetings.
- Developed an acoustic echo canceler for a TDMA handset
- Worked on the development of the variable rate BiCELP vocoder for SK Telecom. Developed the rate decision algorithm and ran in-house MOS and DMOS tests for the vocoder. Its performance was evaluated against the EVRC and QCELP13 vocoders.
- Co-developed a DSP curriculum for the Electrical Engineering department at Howard University, Washington DC. This was a Motorola-sponsored effort.

EDUCATION

Ph. D (Wavelets and Image Processing)
Stevens Institute of Technology, Hoboken, New Jersey, USA

1997

**HONORS,
AWARDS, AND
AFFILIATIONS**

Senior Member, IEEE
International Who'sWho of Professionals
Member, Project Management Institute
Motorola Silver Quill Award
Fulbright Scholarship
British Council Scholarship
Member of Governing Council for New Partnership for Africa's Development (NEPAD)
Reviewer, World Multi-Conference on Systemics, Cybernetics, and Informatics (WMSCI)
Past Reviewer, IEEE International Symposium on Circuits and Systems (ISCAS)