

BERNARD VACHON

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SUMMARY

Embedded Software Engineer with 15 years of experience leading the design of a variety of embedded products, with an emphasis on telecom devices and protocols. Strengths include Linux, C/C++, and a wide range of telecom and multimedia protocols including H.264, AAC, AVB, GSM, ATM, UMTS, GPRS, and EDGE.

PROFESSIONAL EXPERIENCE

Cardinal Peak, LLC
Lafayette, CO

March 2009 to Present

Partner, Project Manager, Sr. Software Engineer

Leading a team of SW and HW engineers designing an audio/video streaming device working on AVB (audio video bridging) networks.

Managed the software architecture, design and development of a Linux-based Digital Video Recording (DVR) system using H.264 video and AAC audio compression.

Managed the development of a mobile phone application using the Android OS.

Architected the software for Windows based video management system (collecting video from distributed mobile DVRs) using MySQL database and Microsoft .NET

Designed and developed a H.264 video and AAC audio streaming (over RTP) device.

Carrier Access
Boulder, CO

May 2000 to March 2009

Software Engineering Manager, Sr. Principal Engineer

Managed the design, development and integration of GSM backhaul optimization component on a European DCS system. The equipment was aggregating GSM and UMTS traffic.

Managed the development and integration of an ATM subsystem (used for backhaul and aggregation of UMTS traffic) and GSM backhaul optimization component on DCS system.

Managed the development and integration of the GSM optimization component on Carrier Access' FLEXmaster product.

Provided technical leadership for backhaul aggregation equipment trials in a number of countries. Carrier Access equipment was used to aggregate and optimize Ericsson GSM and UMTS traffic.

Sr. Staff Engineer

Architected, designed and developed a GSM/UMTS backhaul optimization solution using ATM and HDLC transport.

Software Architect and Engineering lead for the integration of the Carrier Access FLEXengine and GSM optimization component on DSC system.

Designed algorithm for GSM backhaul (A-bis) optimization.

Designed an Inverse Multiplexed over HDLC protocol to carry optimized GSM traffic with minimum latency and overhead.

Wrote engineering specifications and multiple system engineering documents for GSM optimization equipment

Software Engineer

Developed the high level software Architecture for a SONET OC-3/12 product.

Wrote system and engineering specifications for a SONET OC-3/12 product.

Developed a Telcordia GR-1093 state model for SONET and PDH interfaces.

Implemented SNMP MIB enhancement for the Access Navigator NE.

Worked on the implementation of ISDN BRI services over a GR-303 RDT.

Redesigned a TR-08 call processing state machine.

SR Telecom
St-Laurent, Qc, Canada

1997 to 2000

Software Engineer

Development of software for point to multi-point TDMA micro-wave Access Network (AN) using C/C++ and VxWorks on a Motorola 68302.

Worked on V5.2 Access Network project. Implemented on Motorola 68302 processor with VxWorks OS.

Participated in interoperability trials between the SR Telecom V5.2 access network and the Lucent 5ESS as well as the DMS 100.

Matrox Imaging Systems
Dorval, Qc, Canada

1995

Application Engineer

Provide support for Imaging Library and hardware.

Developed sample application for customers using imaging library.

EDUCATION

University of Colorado, Boulder

M. Eng., Engineering Management, 2003

McGill University, Montreal

B. Eng., Computer Engineering, 1997