

William T. Ross (Bill)  
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### Academic Record:

- Sept. /75 - Apr. /82 University of Waterloo, Waterloo, Ontario, Canada  
 Degree: BSEE - Electrical Engineering  
 Major: Semiconductor Physics, Control Systems
- July /72 - July /73 Devry Tech., Toronto, Ontario, Canada  
 Degree: One year of Electronics Technology program  
 Too easy. Left to prepare / save for university
- Sept. /68 - June /72 Pauline Johnston CVS, Brantford, Ontario, Canada  
 Diploma: Secondary School  
 Major: Science and Technology

### Demonstrated Skills:

- Hardware: Digital, Analog, Prog. Logic, FPGA, ASIC, PCB, Lab skills, PCI, USB, EMI, Low Power, Debugging, Test Methodology, Verification
- Software: Assembly: MC68xx(x), Vax 11/780, 80x8x, Nat'l HPC, 805x, DSP5600x, ARC, VxWorks, MIPS, ARM, PIC...  
 High Level: "C", "C++", Basic, Visual Basic, Fortran, VHDL  
 Specialty: Real Time F/W, Drivers, Jungo, W95/8, NT, VxWorks, Embedded Linux
- Systems: System Specification, H/W, F/W, S/W Design Partitioning, Protocols, Interface specification, Implementation, Optimal cost solutions.
- Applications: PC, MAC: Excel, MS Word, Powerpoint, Orcad, Altera Quartus, Synplify, Modelsim, Visual C++/MFC, Windriver...
- Other: Technical Representative for Northern Telecom (Nortel) at various standards meetings ( ADSI, USB ...), Project Leadership, Project Estimation, Technical Lead, Excellent writing and communication skills
- Corporate Resources: Modern H/W, F/W and S/W development tools, test equipment and resources, relationships with suppliers and subcontractors.such as PCB layout, Turnkey development.

**Career Experience:**

- October 2010      Last Assignment (via Flextronics):Avaya Inc (Former Nortel).  
Called in to rescue program at serious schedule risk due to real time, hardware, tools issues plus driver bugs (Coldfire V1 processor) and to train team in debug skills. Very happy customer.  
References:  
  
Director: Brian Egan, (613) 356-8111  
Program Manager: Ken Parry (613) 356-8346  
Manager: Dave Denike (613) 356-8088
- May /96 - Present      Bill Ross Enterprises Ltd. Self Employed, W31, W95/98, 2000, NT Device Drivers, VxWorks, Bell 202 Modem H/W, F/W (8051).  
Altera Quartus Apex/Stratix FPGA high speed (66/133/266Mhz) systems, PCI, High speed PCB layout guidelines, VC++/MFC test applications, Windriver, 3 years for Mosaid Technologies designing 66/133 Mhz customer reference designs involving System spec/design Quartus FPGA, PCI, PCB, PC drivers, responsible for 3<sup>rd</sup> party (myself) qualification of Mosaid ASIC's.  
Mitel: Various Turnkey H/W, S/W phones / peripherals / drivers  
Flextronics: Various HS FPGA designs, Embedded Linux (SIP Phone, drivers, Real Time, C/C++, BSP)  
Nortel: FPGA PBX, CODECS, PWM, Embedded F/W
- Jun /99 – Mar /03      Mosaid Technologies, Kanata, Ontario  
Contractor, responsible for proposing, developing and implementing test methodology for independent evaluation of various Mosaid ASIC's and devising technical infrastructure/methodology for applications group. Provided reference designs for Moasid customers to allow easy ASIC integration. Altera Quartus Apex/Stratix large system designs at 66/133Mhz, VHDL, DDR, PCI, PLL. High speed layout guidance for PCB designers, Windriver and VC++/MFC test applications.
- May /85 - May /96      Nortel, Ottawa, Ontario  
Title:                      Terminal Systems Architecture  
Rank:                     Adviser, Equivalent to manager, technical path  
Awards:                 1990 BNR Quality Award,  
Patents:                 1995, US #5436590 "Digital FSK Demodulator With Automatic Offset Cancellation"

1997, US #5615257 “Screen Based Telephone Set For Interactive Enhanced Telephony Service” (Vista Terminal Architecture), two more pending.

- Last Nortel Assignment: Adviser, Technology Forecast and Investment.
- Previous Assignment: System design prime for residential and PBX terminal architecture with special focus on the boundary between switch and terminal functionality to allow highly functional, cost optimal terminals. The assignment entailed influencing switch architecture and protocols, as well as terminals. Also provided technical support and advice for development groups. Prime on specification of a microprocessor with Mitsubishi containing custom Nortel designed logic. Developed a CAD methodology to allow Altera EPLD's to be used for rapid prototyping, with the same design used in the Synopsys Mitsubishi Verilog environment.
- Major Accomplishments: System design prime for CLASS (including ADSI) terminals. Influenced silicon platform, terminal hardware/firmware, protocols. Designed SCWID (call waiting identification) ASIC, the only Bellcore compliant design in the industry to date. Designed PC gateway for Norstar Key System, an IBM PC card with DMA to interface Norstar TCM link allowing added system features via PC software (CTI). Responsible for product specification, H/W, F/W and PC driver/protocol specifications. Also ported product to serial unit (HDLC) for use on MAC/Unix hosts. Specified analog/digital interface IC for Norstar. Involvement with the above products was from initial specification to final product release.
- May /82 - Apr /85 Norpak Corporation, Kanata, Ontario  
Titles: Project Leader, Sr. Design Engineer
- Specified, designed a Teletext (TTX) prefix processor IC (4,000 gate) to selectively capture 5.72 Mbit/s data from a TV video signal, DMA into user memory. This part also accomplishes raster synchronisation, overlaying a computer generated image over a TV image with imperceptible jitter. Designed a hard disk DMA interface (H/W and F/W driver). Designed a 256x212 pixel display generator board incorporating MC6809 uP, RGB/RF/Composite video outputs, Bell 212A direct connect modem. Met FCC class B.

Identified and corrected TTX bit error problems with the MK4 TTX decoder. The fix involved a complete re-design of the analog/digital front end with simplified alignment procedures. Misc minor assignments.

Sep /81 - Dec /81  
Jan /81 - Apr /81

Norpak Corporation, Kanata, Ontario  
Title: Student Engineer

Defined and wrote F/W to perform product verification tests.

May /80 - Aug /80

Motorola Communications, Toronto, Ontario  
Title: Student Engineer

Designed an automated test bay to perform post production testing of FM transceivers. Project involved extensive analog/digital design. Responsibilities included cost/operator time trade-off analysis, design, final prototype, final report.

Sep /78 - Dec /80

Omnium G, Anaheim, CA, USA  
Title: Design Engineer

Worked in solar energy development (16 meter parabolic reflectors), heading the electronics prototype department. Designed a solar tracking system. Supervised several installations in Libya, Italy and the USA. Left to return to school.

Sep /77 - Aug /78

Westinghouse Canada, Hamilton, Ontario  
Title: Student Engineer

Worked overseas in Libya, installing and maintaining two gas turbines. Responsibilities included control systems wiring and checkout, routine maintenance and operational data collection. The challenge of this job was the isolation of the Sahara desert.

Jan /77 - Apr /77

Massey Ferguson, Brantford, Ontario  
Title: Electricians Helper

May /76 - Aug /76

Algoma Ore Division, Wawa, Ontario  
Title: Student Engineer

Aug /74 - Aug /75

Massey Ferguson, Brantford, Ontario  
Title: Fork Lift Driver

Aug /73 - Jul /74

Coopers Television, Brantford, Ontario  
Title: Repairman

**Hobbies and Interests:**

Electronics, Politics, Economics, Philosophy, Skiing, Travel, Camping

**Character:**

Resourceful, frank, goal driven, diligent, self starter, failure is not an option.

**Recent References:**

Larry David, Flextronics, Director	(613) 895-2050 x 2055
David Smith, Flextronics, N American Technical Sys Guru	(469) 229-2416
Ghasson Moussa, Flextronics, Manager	(613) 895-2050 x 2424
Dave Pepper, Flextronics, Coworker	(613) 895-2050 x 2736
Bill Webster, Flextronics, Coworker	(613) 895-2050 x 2012
Paul Koens, Nortel, Manager	(613) 763-3951
Steve Rhodes, Nortel, Divisional Technical System Guru	(613) 763-3873
Brian Parisien, BlueArc Comm., Operations Manager	(613) 254-6592
Fred Stacey, Mitel, Director	(613) 592-2122 x 3721
Bob Star, Mitel, Manager	(613) 592-2122 x 4783
Paul Provencal, Mitel, Coworker	(613) 592-2122 x 3006