

Benjamin E. Henty

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SUMMARY	Seeking full-time position in which I can leverage antenna and propagation expertise with test, measurement and software design skills at a high impact company.	
EXPERIENCE	Doctoral Research, Carnegie Mellon University	Aug. 2002 – Present
	Investigating mobile, vehicle to vehicle (V2V), DSRC communication channel using a CW, OFDM and sliding correlator (DSSS) waveform channel sounder. Studied MIMO antenna arrays and time-reversal techniques for RF communications in ventilation ducts used for distributing signals (e.g. IEEE 802.11a/b/g) indoors. Realized a prototype installation of ventilation duct based IEEE 802.11g network in 25,000 sq. ft., 3 story building while working remotely in Stavanger, Norway. Assisted in product development and patent licensing of ventilation duct research. Performed and published first demonstration of time-reversal focusing at RF frequencies. Demonstrated inverse doppler shift phenomenon in magnetic spin waves. Submitted several papers. Currently have 24 published works including two US Patents.	
	RF Communications Consultant, In-Building Concepts	Jan. 2002 – Jul. 2002
	Aided technology assessment and business case evaluation of wireless infrastructure market for nascent wireless division of electrical infrastructure design company. Performed construction management in 50 story, Class A office building in downtown Chicago for cellular, PCS and wireless LAN Distributed Antenna System (DAS). Utilized AutoCAD and SitePlanner software to create scope of work and project bid documents for in-building wireless projects.	
	Wireless Network Engineer, Wireless Valley Communications	Jan. 2000 – Apr. 2001
	Product manager at pre-IPO startup company in charge of Wireless LAN design and measurement products LANFielder and SiteSpy and to support and maintain wireless propagation channel simulation tools SIRCIM and SMRCIM. Areas of responsibility included C/C++ software design and development, creating and defending patents for products, technical consulting, and demonstrating products at conferences, at training sessions and for potential investors and venture capitalists.	
	RF Communications Engineer, DaimlerChrysler Rail Systems	May 1999 – Aug. 1999
	Evaluated spread spectrum modem for use in train to station communications via test track and Pittsburgh Airport tunnel measurements Tested ultrasonic train presence sensor, microwave beam sensor and train radio systems.	
	Software Engineer, Duquesne Power and Light	May 1998 – Aug. 1998
	Computer Support, United States Steel	May 1997 – Aug. 1997
EDUCATION	Ph.D. in Electrical and Computer Engineering Carnegie Mellon University, Pittsburgh, PA	Sep. 2002 – Dec. 2006 GPA 4.00/4.00
	M.S. in Electrical Engineering Virginia Tech University, Blacksburg, VA	Sep. 1999 – Aug. 2001 GPA 3.94/4.00
	B.S. in Electrical and Computer Engineering Carnegie Mellon University, Pittsburgh, PA	Sep. 1995 – May 1999 GPA 3.69/4.00
SKILLS	Teach RF propagation, wireless network design, measurement and simulation short courses. Software: MATLAB, Simulink, C/C++, SitePlanner, SuperNEC, HFSS, AutoCAD, VEE, Perl, Python, Java, L ^A T _E X, CVS, Subversion, Visual Basic, Cadence, OPNET, Maple.	
ACTIVITIES	Helping design and install of AM and FM radio repeaters in two automobile traffic tunnels of Pittsburgh. Amateur radio operator (callsign: NN3H), ARRL Volunteer Examiner. Station manager for Carnegie Tech Radio Club (W3VC). Sound engineer. Eagle Scout.	