

## Nicole Hamilton

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### Objective

A senior or leadership role in software development.

### Qualifications

Successful software entrepreneur, engineer and manager with superb academic credentials.

Experienced in all phases of software engineering and management from concept to continuing engineering: Market requirements, technology licensing, standards, architectural and engineering specs, resource plans, recruiting, performance evaluations, budgets, scheduling, testing, triage, contract negotiation, customer support, etc.

Gifted and prolific system software developer with numerous patents issued or applied for. Expert knowledge of search engine internals, consumer and mobile devices, OS concepts and low-level design, compiler design, algorithms, heuristics, C, C++, C#, Win32, 64-bit Windows. Strong also in .Net, UNIX, Linux, SQL. Very strong interest in Android devices.

Outstanding communications skills, writing for publication, public speaking and moderating debate in public forums.

### Education

MBA Valedictorian, Boston University, May 1987.

BS and MS, Electrical Engineering, Stanford University, June 1973.

### Experience

Sep 1987 to Present    President (sole proprietor), Hamilton Laboratories, Redmond, WA

Created a software product business as an independent software vendor selling tools to professional software developers worldwide. Full-time except during stints as an FTE at Microsoft, Haydrian and RealNetworks.

Sole author of [Hamilton C shell](#), a recreation of the UNIX C shell command language and over 170 commands and utilities (grep, sed, diff, cron, tar, head, tail, sort, su, etc.) completely from scratch on Windows.

Released a new version in 2009 for Vista and Windows 7, adding a new 64-bit build and numerous new features. Currently completing work to add code-signing, better support for Windows 7's elevation scheme, full Unicode / UTF-8 support through-out and support for Microsoft's new long Unicode filename format (designed to get around the longstanding MAX\_PATH limit on pathnames in Win32.)

Jun 2007 to Sep 2008 Senior Program Manager, RealNetworks, Seattle, WA

Program manager (6-08 to 9-08) for RealPlayer on Linux and mobile devices. Created the project plan, UI and the schedule for RealPlayer on mobile devices, assigned tasks to our devs in Seattle and off-shore and monitored the progress to completion.

Program manager (6-07 to 6-08) for RealDVD "Facet," a Linux-based DVD player incorporating a hard disk for storing movies. Wrote the market requirements and recruited our dev team. Point of contact for our relationship with DVD CCA and other organizations to license CSS (Content Scramble System, the encryption system used on DVDs) and with other needed IP. Worked daily with our in-house and outside counsel on IP (patent and copyright), contract and DMCA issues. Found vendors for prototypes. Wrote the product specs. Defined and ran our milestones.

Nov 2006 to Mar 2007 Program Manager, Haydrian Corporation, Bellevue, WA

Program manager for the entire engineering organization of 4 leads and 24 developers and testers. Reporting to the VP of engineering, wrote product requirements and engineering specifications for our Linux/PostgreSQL/Java-based anti-money laundering systems, defining, sizing and prioritizing work items, triage and mentoring.

Sep 2002 to Jun 2005 Senior Software Development Engineer, Microsoft, Redmond, WA

Wrote 10% of all the code in the then- new MSN Search engine, which went live in Jan 2005 and has since been rebranded as Bing. Joined MSN in Jul 2003 as the ninth dev on the team (which quickly grew to over 40 devs.) Invented over 700 heuristics and created the dynamic ranker and query language (parser and compiler.) My code, all in C++, defined how the users' queries were interpreted (what the user was searching for in our index of 5 billion docs on the web) and the order of the results they got back. Previously, worked in the Windows Update group, contributing a SQL parser in C# to guard against injection attacks.

Jul 1981 to Sep 1987 Workstation Software Manager, Prime Computer, Framingham, MA

Second-line manager (1986-1987) of system software for a team building a UNIX workstation using SGI graphics and MIPS processor technologies. Responsibility included negotiating deliverables and contract language with vendors AT&T, SGI and MIPS. Section manager of 6 engineers (1984-1986) building a portable terminal emulator, then the UNIX OS and drivers for our workstation. Our team consistently delivered on-schedule, on one occasion, "to the day," exactly as promised 9 months earlier, with not a single bug discovered for almost 4 months. Individual contributor (1981-1983), advanced technology.

Jun 1973 to Jul 1981 Staff Engineer, IBM, Austin, TX

Individual contributor to IBM's early micro-based stand-alone word processors. Hardware and software design projects included the instruction set and gate level design of a custom display processor; a fault-tolerant serial communications chip; a novel compression algorithm; "structured macros" allowing assembly code to be written as a HLL; and to create build instructions for working node-for-node models in TTL of our LSI chip designs. Many of these started as bootleg projects on personal time.

## Patents Issued

1. [4247853](#), "Alphanumeric CRT display system with means for storing positional data calculated during an initial scan," issued Jan 27, 1981, assigned to International Business Machines Corporation.
2. [7243102](#), "Machine directed improvement of ranking algorithms," issued Jul 10, 2007, assigned to Microsoft Corporation.
3. [7254576](#), "System and method for locating and presenting electronic documents to a user," issued Aug 7, 2007, assigned to Microsoft Corporation.
4. [7363296](#), "Generating a subindex with relevant attributes to improve querying," issued Apr 22, 2008, assigned to Microsoft Corporation.
5. [7428530](#), "Dispersing search engine results by using page category information," issued Sep 23, 2008, assigned to Microsoft Corporation.

## Patents Applied For

1. [20060004717](#), "Dispersing search engine results by using page category information," filed Jul 1, 2004, assigned to Microsoft Corporation.
2. [20060074864](#), "System and method for controlling ranking of pages returned by a search engine," filed Sep 24, 2004, assigned to Microsoft Corporation.
3. [20060173822](#), "System and method for optimization of results based on monetization intent," filed Feb 3, 2005, assigned to Microsoft Corporation.
4. [20070143390](#), "Application programming interface for administering the distribution of software updates in an update distribution system," filed Mar 11, 2005, assigned to Microsoft Corporation.
5. [20090150409](#), "System and method for automatically creating a media archive from content on a recording medium," filed Dec 10, 2008, assigned to RealNetworks, Inc.