

## PAUL T. BARHAM

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### **DIRECTOR / MANAGER OF RESEARCH AND DEVELOPMENT / ENGINEERING / PROGRAMS** **Software, Technology, and/or Professional Services Markets**

Innovative, high technology lead plus individual contributor with successful achievements and experience in designing, developing and delivering large-scale system and software products and projects as well as professional technical services. Results driven entrepreneur with skills and strong experience in cutting-edge research and development, program management, product/project specification, software development, corporate and business development, partner and vendor management, and customer interface. Qualified leader, team builder and mentor with a strong technical background and demonstrated abilities functioning in a fast-paced and highly-independent environment managing diverse virtual and distributed teams with strength in communicating across groups, divisions and with management.

- Research and Development Innovation and Leadership
- Product/Project Definition and Specification
- Program Management
- Internal and External Resource Management
- Software Development Management
- Team Building and Leadership
- Budget and Schedule Management
- Strategic Planning & Execution

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### **PROFESSIONAL QUALIFICATIONS**

- Over 22 years leading and conducting cutting-edge research, development and engineering projects with a focus on building innovative applied solutions and yielding over 25 publications. Diverse background including 5 years of university teaching and research, 4 years of U.S. Government R&D military simulation system development, and 13 years of applied industry experience designing and developing complex research-oriented training systems integrating object-oriented (mostly C++) software with cross-platform, state-of-the-art computing, electronic and interface systems.
- Over 15 years managing, leading and mentoring software, hardware and system engineering teams including distributed and virtual teams and contractors. Along with my teams, designed, developed and fielded complex first-of-a-kind, PC-based, integrated hardware/software training systems (featured on CNN and Discovery Channel for being novel and bleeding-edge).
- Over 13 years basic and applied R&D program management experience, operating with little or no management direction and oversight, effectively:
  - o designing and specifying product/project features;
  - o interfacing with customers to gather requirements, maintaining proactive and positive communications, and managing expectations;
  - o clearly prioritizing activities with a focus on measurable results;
  - o establishing, tracking and managing costs, resources and schedules;
  - o maintaining and promoting clear and precise communications and reporting across groups, divisions and to executive management;
  - o managing multiple concurrent and complex projects and programs;
  - o establishing and maintaining productive internal and external partner relationships;
  - o building programs from concept to final implementation and fielding; and
  - o preventing and minimizing issues and impacts by proactively anticipating bottlenecks and potential problem areas.
- Over 8 years serving as group program manager leading and directing up to 4 PMs to manage all programs for a corporate group/division including overall budget accountability, hiring, dismissing, training and mentoring.

**PROFESSIONAL BUSINESS EXPERIENCE**

**Excell Data Systems (Contractor)**  
**Microsoft ACES Game Studio**

**November 2008 – January 2009**  
**Redmond, WA**

**Program Manager**

As a Technical Program Manager, worked in the ACES Game Studio on the ESP simulation platform ([www.microsoft.com/esp](http://www.microsoft.com/esp)) defining product functionality and leading feature teams to create product improvements and extensions in a matrix management environment. Coordinated with business development and sales to understand customer requirements then converted these requirements into clear and concise product requirements. Used these requirements to build product specifications and then lead the feature team to implement and test. The entire ACES studio was closed during Microsoft downsizing due to the weak U.S. economy on January 23, 2009.

**Advanced Interactive Systems, Inc. (AIS)**  
**Reality by Design, Inc. (RBD) Subsidiary**

**November 1996 – November 2008**  
**Seattle, WA & Monterey, CA**

**RBD Director of Emerging Technologies (11/96 - 6/99)**

**RBD Vice President of Engineering (6/99 – 10/03)**

**RBD Director of Government Programs (10/03 – 12/05)**

**Director, RBD and FSS Boards (11/06 – 7/08)**

**AIS Corporate Vice President of Strategic Development (12/05 – 11/08)**

In 1996, established and lead new RBD divisional office, built customer relationships, created new business and lead software design and development efforts for newly hired staff. Served as lead program/product manager for *Bayonet™*, a first-person shooter, virtual simulation based on Silicon Graphics workstations running UNIX delivered to the U.S. Army in January 1997. As lead program/product manager, lead the design, specification, implementation and fielding of *Soldier Visualization Station (SVS™)* the world's first PC-based first-person shooter, virtual simulation commercial product delivered to the U.S. Army (Ft. Benning) in August 1997. Worked with two other owners to grow fledgling business from three to twenty-four employees and from \$0 to approximately \$3M in annual revenues in three years.

Managed and lead distributed and virtual R&D software, hardware and systems engineering teams for RBD spanning three geographic locations (Monterey, CA; Boston, MA; Orlando, FL). Continued serving as lead R&D manager for SVS™ obtaining over \$10M in Government R&D funding, working with the customer to define product features, and managing software engineering team to implement and deploy the product. Formed and managed teaming and partnering agreements with Lockheed Martin, Raytheon, SAIC and other large system integrators. Together with two other owners, negotiated sale of RBD to AIS in November 1999.

Managed all government programs for RBD subsidiary as the group program manager (PM) for ground-based virtual simulations guiding and mentoring other PMs and project managers/engineers within a matrix organization for complex and/or multiple concurrent R&D programs. During tenure, managed and/or lead over 35 U.S. Government (PEO STRI, RDECOM, PEO Soldier, DARPA) funded programs. Organized and lead a Defense Modeling and Simulation Office (DMSO) cross-organization industry and government team to define and specify a standard for human modeling and simulation using the High Level Architecture (HLA). Served as the co-chair for the human modeling group for the Army.

Working directly for and with the AIS CEO/President and senior management team, created, documented, and implemented corporate-level (i.e. cross divisional) global growth and value creation strategies. Conducted market research to identify competitors, potential strategic partners and acquisition/merger targets.

**Naval Postgraduate School**  
**NPSNET Research Group, Computer Science Department**

**February 1993 – November 1996**  
**Monterey, CA**

**GS-13 Supervisory Computer Scientist (12/95 – 11/96)**

**GS-12 Computer Scientist (05/95 - 12/95)**

**GS 11 Computer Specialist (02/93 - 05/95)**

Served as R&D manager, technical lead, senior software architect, computer lab manager, and lead software engineer for *NPSNET-IV*, an open-source, Distributed Interactive Simulation (DIS) compliant, object-oriented, visual simulation system consisting of more than 100,000 lines of C++/C code developed at NPS and written using IRIS GL/Open GL and Performer.

## EDUCATION

**M.S., North Carolina State University, Raleigh, NC**

*Master of Science (with thesis) in Computer Science, GPA: 3.75*

*Computer Graphics Concentration, Mathematics Minor*

*Honors: Outstanding Graduate Teaching Assistant (twice)*

**B.S., North Carolina State University, Raleigh, NC**

*Bachelor of Science in Computer Science, Magna Cum Laude, GPA: 3.73*

*Honors: Phi Kappa Phi, Upsilon Pi Epsilon, Pi Mu Epsilon, Academic All American*

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## PROFESSIONAL AFFILIATIONS

ACM – Association of Computing Machinery

ACM SIGGRAPH – ACM Special Interest Group for Computer Graphics

IEEE – Institute of Electrical and Electronics Engineers

IEEE Computer Society

AUSA – Association of the United States Army

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## COMMUNITY SERVICE

**Volunteer Firefighter – Falls Volunteer Fire Department, North Carolina**

*Deputy Chief (1 year), Captain (7 years), Active Member (10 years)*

*Daughters of the American Revolution (DAR) Good Citizenship Award*

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## PROFESSIONAL PUBLICATIONS

25+ published conference proceedings and professional journal papers

List Available Upon Request

Most searchable at <http://scholar.google.com/scholar?q=Paul+T.+Barham&hl=en&lr=>

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## REFERENCES

List available Upon Request

Linked In Profile: <http://www.linkedin.com/in/paultbarham>

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## SECURITY CLEARANCE

Active U.S. Department of Defense Secret Clearance (as of November 2008)