Larry Mellon

Over ten years in online games; over ten years in distributed simulation engines
Over seven years as an engineering leader in both production and quality assurance.
Over five years as a technology lead on the business planning and pitching side as well.

Experience in engines, tools and testing

- *KIXEYE*: built, trained and led the performance testing team for all Facebook, Unity and mobile games.
- *Electronic Arts*: simulation engine lead (The Sims Online), automated testing and metrics team lead for both TSO and The Sims 2. We built one testing tool that supported load testing, feature regression and 3D client benchmarking.
- *C/C++ lead programmer:* online game engines, massively multi-threaded simulation engines and tools.
- *Industry work*: ran the boot camp for online games at the Game Developer's Conference, plus over a dozen lectures on automated testing, scalability and metrics. Co-authored a textbook for online games.

Leadership experience:

- *Cross-team communication skills* from years of working in engineering, quality assurance and business development provide a seamless translation between customer requirements, technology options and business implications.
- *Built new teams*, in both startups and established corporations.
- *Ran small engineering teams* in research labs, game production and quality assurance groups, using SCRUM, test-driven development, milestone metrics and other agile techniques.
- *System architect for SAIC/DARPA:* Synthetic Theater Of War and Advanced Distributed Simulation.
- *System architect for Emergent Game Technologies*: an MMO engine startup, focused on tools and processes to scale online game development.
- A quick learner, with broad interests and leadership roles outside of software.

My Objectives:

- *My passion is rapid, iterative development* of high-quality user experiences, especially at scale.
- *I'm looking for a leadership role* (production, quality or business) where I can have an impact with my existing skills, while learning something new on the fly.
- Roles that target software production, systems performance & optimizing processes across the management, engineering and quality assurance groups are where my passion and expertise align.

Contact: larry.f.mellon@gmail.com or cell (925 876 4131)
GDC lectures & blog: www.MaggotRanch.com/biblio.html. Sample test plan & code: www.github.com/griddletoks/wow-test

KIXEYE: August 2012 – August 2014

Started: Manager (Systems Performance Group) & promoted to Manager (Quality Engineering Group)

I helped build, mentor and run the performance group for the central Quality team, where we migrated all mobile and browser games (War Commander, Battle Pirates, Vega Conflict, TOME, WC: Rouge Assault) to AWS-based load testing for backend components. We also did frontend testing, using local hardware, for both performance and regression testing. By embedding QE engineers into each team, we were able to partner with production to build test and measure hooks into the game code and improve processes. Major improvements in development time, scalability and operational cost/quality were directly attributed to load testing; we provided reliable metrics, automatically, for all engineering, QA and executive teams, company-wide. LoadRunner, JMeter and MonkeyTalk tools were used initially, then we built our own out of open source.

By using automated tests as an executable specification of the server, we developed a solid understanding of the functionality and performance characteristics of all backend components. By using the tests as both a schedule predictor and acceptance criteria for high quality, high scalability releases, our executive team had their best ever view of the true cost, risk and schedule drivers of all titles and began to rely heavily on load testing to measure progress, increase server uptime and extend the definition of quality.

Self-Employed: Consultant and Writer

July 2008 – July 2012; August 2014 to February 2015

I offer seminars on automated testing and metrics in agile development for companies such as Apple and Bioware. Consulting provides me with time to focus on my writing projects (science fiction and iterative software development) in between larger projects. I prefer a longer-term team structure to consulting roles, but I am open to interesting opportunities.

Emergent Game Technologies: January 2005 – June 2007

Started: Senior Development Director & promoted to VP (Engineering)

EGT was a platform startup that targeted massively multi-player games. I held business planning and system architecture roles, and was one of the three executive leads for fundraising and business development across the American, Korean and Chinese markets, acquiring over $10 million in VC funding. We grew from three people to over eighty people. My customer-facing roles included developing test-driven production models, writing white papers, conference lectures and engineering roadmaps. I did all technology pitches to both prospective customers and investors.

Automation Corporation: July 2004 – January 2005

Founder: System Architect, Business Development

Following the success of the automated test and measure systems I created for EA, described below, I left to pursue a market opportunity: production and scalability problems across the online games industry. This fed into EGT, described above.

Electronic Arts, Maxis Studio: June 2001–July 2004

Started: Software Engineer III & promoted to Associate Development Director

I was one of the leads in replacing the brittle system architecture of EA's flagship MMO title, *The Sims Online,* and in a massive re-factoring project to increase development speed and stability. I rebuilt the simulation code for client/server execution. I built a new team to field my automated testing designs, which used a single, data-driven client to run load and regression tests, with a metrics system that supported both server performance and gameplay analysis. *These new systems proved so effective that TSO's entire production focus shifted to revolve around automated testing, taking months off of the schedule. Extending this work became a top studio priority and proved to be a key tool in shipping The Sims 2.0.*

My last project at Maxis was working with The Sims 2.0 content, testing and engineering teams: integrating our new automated build, test and measure systems into their tools, processes and code base. Focusing on ease of use, reliability and speed was key to the success of the tools. Robbie, the friendly face of the automation system, became a verb within three weeks of introduction. The real-time metrics Dashboard provided aggregated views of player behavior and performance per module, while also allowing accurate milestone projections. The combination of the two tools allowed many optimizations of production bottlenecks and their impact made a profound impression on me. My background in UI design, in quality assurance and in scalable engineering tools took our toolkit to a level far superior to any other tool chain in Maxis, and I learned that a good tool chain had a tremendous effect on the productivity and happiness of the team. My most vivid memory is of a stranger stopping me in the hall one day and saying, "I just wanted to thank you for making the pain go away." Ever since then, I've been looking for an opportunity to have an impact on the tools and processes of production.

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Orcus 3D Inc.: August 2000 – February 2001
Senior Software Architect
A platform startup that targeted MMO games, my role was scalability and load balancing within and across clusters. I also contributed to marketing work and the business plan. We could not get full funding during the .com crash.

Science Applications International Corporation (SAIC): 1993 - 2000
Started: Senior Software Engineer & promoted twice (Senior Computer Scientist, Branch Manager)
I was a lead architect in DARPA's *Advanced Distributed Simulation* projects; we helped define scalability techniques such as interest management and predictive contracts, and evangelized industry-wide standards for interoperability via conference lectures, white papers and working groups. I also filled system architect and technical writer roles for business development, winning contracts such as the *Synthetic Theater of War (a $50M contract)* and the *HLA RTI 2.0,* a network engine that became the standard for integrating DoD simulations. I was a Principle Investigator in DARPA's *Advanced Simulation Technology Thrust*, focused on tightly coupled cluster computing. Overall, we grew the division from under ten people to over one hundred people.

Jade Simulations: 1988 - 1993
Started: System Programmer & promoted twice (Technology Evangelist, Branch Manager)
As the first employee for this startup, I built transport layers for our simulation engine across supercomputers and clustered workstations. We took an academic research project and turned it into a high quality, high performance parallel simulation engine. A key part of this transformation was the time efficiency and clarity of focus provided by the automated testing tools, metrics tools and nightly benchmarks that I created. I worked with our national lab users to plan and build new systems, such as checkpoint/restart extensions to the Unix kernel for clustered computing. I built programmer tools to reduce compilation times and prevent common distributed system errors. I taught Jade's training courses for object-oriented design, parallel processing and large-scale software development. I took on business development responsibilities when I opened our branch office in Washington, D.C. Our market was national research labs and telecommunication labs. Jade was acquired by SAIC to spearhead their growth into simulation-based training. I found I loved the innovation and flexible roles culture of startups.

University of Calgary and Alberta Research Council: 1983 – 1988
System Programmer, Tutor
I worked my way through school as a programmer for the distributed systems group (Canada's largest research project at the time), and by tutoring other undergraduates. I built UNIX device drivers, Macintosh group collaboration tools and programmer tools.

Education:
1990: B.Sc. University of Calgary, taking minors in ancient history, modern dance and English literature.
1990, 1994: Master's coursework on parallel simulation & massively parallel computer architectures. My mini-thesis was a distributed classroom system, implemented with an experimental skeleton-programming model.

Outside of work:
I find great clarity in the writing process. I have done over twenty conference lectures to help build my technical expertise. I've recently extended my writing projects into short stories, story-driven simulation games, alternate histories and useful patterns for building rapid development/release of high-quality systems, especially at scale.
I have travelled around the world by competing in international sports (rugby, wrestling and ultimate frisbee), captaining and coaching along the way. I have led several community improvement projects. I now focus mainly on Tai Chi, garden design and writing.

Relocation data:
I am Canadian, with permanent resident status in the USA (Green Card visa). My wife is American, a writer by trade. We are always interested in moving to new places and learning new things. I started in Western Canada (Calgary/Banff region), then moved to Washington D.C. to open an office for Jade Simulations. We relocated to Silicon Valley to join the online game industry, and spent a few years in Los Angeles as well. We are currently in San Francisco, and are open to international opportunities.

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