

## mGen Inc.



7 Marshall Ave • Mansfield, MA 02048 • Ph. 508-549-0970 • Fx. 508-408-0330

Scot Peterson is the President and Chief Technology Officer of mGen Inc. a leading digital learning systems consulting firm founded in 1995. mGen Inc. specializes in the application of complementary technologies/systems to provide enhanced classroom learning capabilities. mGen's origins are rooted in Learning Management System software development, database development, video recording, editing, and transmission, telecommunications, and classroom based training technologies. The mGen technology consulting group specializes in educational and classroom environments and is committed to providing high quality educational services that promote the tangible applications of cutting edge technologies.

Mr. Peterson brings over 18 years' experience in design, development and architecture of software applications. His diverse experience in custom development and program management for web application development and modeling has proven highly successful for his clients. Scot has extensive experience in reporting systems and rapid development of custom applications for his customers.

Our clients have included the United States Army, United States Air Force, United States Navy, The Royal Saudi Air Force, United States Department of Agriculture USDA, University of Connecticut, and many other well-known entities.

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## Scot Peterson

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### Senior Instructional Technologies and Telecommunications Architect

Over 18 years of development, design, engineering, and implementation experience with instructional technologies, telecommunications, computer systems, networking, software development, and project management. With 10 years of working directly with the US Army leading the development and implementation of new training capabilities and technologies from conceptual design to completion with numerous documented technologies and practices currently implemented.

#### ***Professional Accomplishments:***

- **Lead Design Engineer** Digital Presentation System– Designed, engineered, prototyped, and tested a state of the art digital classroom presentation capability fully compliant with all digital standards and ALC2015. System provided dramatically expanded capabilities beyond the capabilities of the previous analog only solution. Researched and document market technology leaders and hosted a technology shootout incorporating a complete cost benefit analysis for final vendor selection. Digital system incorporated a new custom design utilizing a fiber optic infrastructure, supporting HDMI 1.4, HDCP compliance, EDID compatibility, 3D video support, bi-directional USB and RS232 communication protocols, digital matrix switching, audio feedback eliminators and auto echo cancellers, Tandberg video tele-training, electronic white boards, wireless audio systems, digital video recorders, gaming workstations, NEC approved networking equipment, camera systems, and virtualization and collaboration software. Final solution created a vastly improved capability baseline and expansion capability with minimal cost impact by increasing savings through a simplified installation, fewer components, reduced cabling, reduced craftsmanship, negation of environmental influences, and centralized trouble shooting.
- **Lead Project Manager/Engineer** - Fort Bliss United States Army Sergeants Majors Academy (USASMA) Sun Microsystems thin client deployment of 1186 workstations and 28 servers providing capabilities to support the entire academy. Lead onsite vendor meets with Fort Bliss leadership and thin client vendors detailing the proposed system capabilities, shortfalls, project scope, work plans, schedules, objectives, and vendor tasks. Provided TRADOC leadership with detailed project cost estimates, capability statements, status reports, schedules, and deliverable milestone tracking. Developed project from original concept to final implementation. Lead post installation issue remediation meetings with vendors and leadership providing technical solutions and specific direction to vendors for issue resolution or satisfactory workarounds. Designed, vetted, and negotiated a campus wide network upgrade including the replacement, testing, and documentation mapping of the entire fiber optic infrastructure, and edge and core switching technologies providing USASMA with a state of the art 10Gig infrastructure capable of providing lightning fast thin client access to the servers within the campus and across post. System incorporated Sun Microsystems Sun Ray session servers, Sun ray Clients, Brocade Networking, Server load balancing technologies, Windows Terminal Services, VMware virtualization, video streaming, multiple security enclave access, SAN storage, and physical server room development.



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- **Lead Designer/Project Manager**- US Army Digital Master Gunner/Battle Staff Integrator Course Jumpstart Initiative, development and implementation of a technology capable of delivering virtualized Battle Command applications to student computers without modification to the client system. Responsible for technology evaluation, concept development, performance work statements, project cost estimates, timeline development, end user coordination, quality standards, implementation, and project tracking. Provided technical evaluation and analysis of virtualization technologies, position papers of vendor product offerings, vendor use cases, vendor data sheets, and interviewed with Battle Command Program Managers to develop way a head strategy for the implementation. Recommend the most technically suited product and provided the conceptual drawings, concept documentation, and designed and coordinated a final solution with the chosen vendor. Final design implemented VMware View virtual infrastructure, VMware vSphere, VMware ThinApp, Gaming Workstations, Network Appliance SAN storage, Dell Servers, delivering Force XXI Battle Command Brigade and Below (FBCB2) on a virtual Linux workstation, Maneuverer Control Support (MCS) on a windows XP virtual workstation, Battle Command Sustainment Support System (BCS3) as virtualized oracle database and windows packaged workstation and Command Post of the Future (CPOF) as virtualized application and other BC application.
- **Lead Engineer/Project Manager - Battle Command Training and Distributed System** managed the development, deployment, sustainment, and DoD Information Assurance Certification and Accreditation Process (DIACAP) certification of virtualized server infrastructure supporting over 1000 simultaneous users. Onsite Camp Dodge prototype review, and analysis presenting hardware and software design improvements, identified qualified installation contractors, developed objectives, milestones, and performance work statements, and provided senior technical assistance to implementation. Coordinated PEO-STRI, installation vendors, Software vendors, networking vendors, TRADOC G6, Fort Bliss NEC, Battle Command Administrators, and DPW to deliver, implement, test, and evaluate licensing of the system. Researched and contracted approved DIACAP Agents of Certification Authorities and developed required documentation for TRADOC, G6, system contractors, and Fort Bliss leadership to achieve certification and signature. Served as a single point of contact for all efforts contracting, planning, installation, testing, active deployment, sustainment, certification, and portfolio management. System incorporates AKO single sign with a secure Citrix ICA Client, Citrix XenApp, VMware View, HP SAN, Intel blade chassis and cisco firewalls
- **Lead Engineer: Battle Command Universal Whitebox Trainer**, develop and certify a new battle command training capability, capable of supporting the Battle Command common platform applications within one digital trainer. Developed a project scope and conducted predict meetings with the Battle Command Program Mangers, Army Gaming, and software material developers. Provided technical and analytical guidance compiling the desperate system requirements into a master superseding list. Engaged Dell Inc. Custom Factory Integration, Nvidia Inc. and VMware engineers to design and prototype a unique system capability that met the superseding requirements. Coordinated prototype delivery and testing, directed cross application troubleshooting, and achieved final certification with each BC program manager. Personally performing final review of all software and hardware operational capabilities, quality standard documentation, and created final build images for deployment. Single point of contact for all BC PMs, Dell and VMware engineers, Schoolhouse end users, and deployment contractors managing the end user and vendor integration tasks, deliverables and providing status reports. Final technology utilized Application virtualization, virtual machines, high end gaming hardware, windows XP, Linux, Oracle, Virtual Battlespace 2, and collaboration tools.



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**MGEN Inc.      President/Chief Technology Officer      1996-Present**

- President/Chief Technology Officer –mGen Learning Management System developed original concept and orchestrated development of 4 major software releases over a 10 year period directly overseeing 3 project managers and 23 software developers and testers.
- Lead Engineer and Architect -Navy Marine Core Internet service level agreement to providing real-time redundant Learning Management system and failover between Norfolk VA and San Diego CA with active-active synchronized Oracle database, content acceleration
- Lead Engineer and Architect –United States Department of Agriculture Custom Learning Management System incorporating USDA business processes , naming conventions, forms, and integration with existing legacy database systems
- Strategist for product LMS and LCMS design and software engineering efforts
- Successfully engaged investors and developed company to over 45 full time employees
- Negotiated sale of exclusive software rights in 2004

### **Education:**

University of Massachusetts May 1994

BS in Electrical Engineering Technology

### **Skills Summary :**

**Army Security Protocols and Processes:** DITSCAP, Certificate of Networkiness, Tempest & RED/BLACK Installations, AR25-1&2, MSEL2, Chess, AKM Goal 1 waivers, AKO Single Sign On, RETNA, Ghost Imaging, ActivIdentity

**Video Systems:** Crestron, Extron, Kramer, Sony, Panasonic, Vaddio, Smart Technologies, Tandberg, VBrick, video streaming, video multicast, digital and analog matrix switching, audio matrix switching, audio processing, audio video sampling, digital post production, live production, mobile production. IP camera systems, video surveillance, video encoding, wireless audio and video transmission, RF spectrum analysis, computer graphics and gaming, video on demand, digital signage, kiosks, and Content accelerators

**Networking:** Cisco, Brocade, Enterasys, and HP multiple security enclaves, Routing, Content acceleration,

**Communications:** Satellite, Microwave, UHF, VHF, 802.X, Fiber, UTP, FDDI, ATM, Ethernet, IGMP, and TCP/IP

**Hardware and Operating Systems:** Solaris 10-6, Plan 9, Red Hat Linux, MS, SGI, Windows Server all Versions, VMware,

**Database Development:** Database Oracle 6 - 10, MS SQL Server 2005 -2010, MySQL, and MS Access

**Programming Languages:** PERL, OS Shell scripting, SQL, T-SQL, PL/SQL, C#, VB, JavaScript, HTML, XML, Flash, Java, SOAP, and Web Services,