Todd B. Cutick

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SUMMARY:

Experienced Subject Matter Expert (SME) and director of research, development, engineering, and systems architecture/engineering with a track record of high performance throughout my career in aviation, space systems, intelligence, and defense. I have extensive experience in complex enterprise architecture design, research and development, program and project management, as well as proven skills in systems development, and financial analysis, proposal and business development, RFP/RFI response, and strategic marketing as well as excellent communications skills from Senior Manager through C-Suite levels. I maintain a passion for team development, leadership and coaching, solving tough business technology challenges, and tactfully providing unambiguous feedback to senior staff for planning and decision making. I continuously expand my skill set in the service of clients I serve.

BUSINESS / TECHNOLOGY SKILLS

- Enterprise Architecture (Zachman, DoDAF, TOGAF)
- UML/SySML/Use Case Modeling (Rose/Sparx Enterprise Architect/GDPro/Visio)
- Relational/No-SQL/XML/OO Database Design
- Modeling and Simulation
- Agile methodology (Scrum)
- Healthcare Information and Management Systems
- Intelligence Systems and Data Analytics
- Cryptography Systems
- Satellite, Manned Spacecraft and Aviation Systems
- MacOS/Windows/Linux
- Enterprise Resource Planning (SAP)
- User Story Gathering and Assessment
- Integrated Management Systems Standards (ISO, CMMI, DoD)
- RFP/RFI/SOW Development and Responses
- Business and Technical Presentations
- Program/ Project Management (MS Project, Open Plan, Primavera)
- Cloud Architectures AWS/Azure/Custom)
- Virtualization (Xen, Hyper-V, VirtualBox)
- Web-based Document Management Systems
- Technology/Software/Hardware Tradeoff/SWOT Analysis
- Content Development (text, video, audio, imaging)
- Full Stack Web Development Architectures and Frameworks
- Satellite and Aviation Systems Architectures, STK Certification

EXPERIENCE:

Todd B. Cutick dba Cutick Analytics, 2009- Present, Subject Matter Expert (SME)
RD&E, Systems Engineering, and Enterprise Architecture Consultant, multiple projects
Provided strategic systems engineering and architectural leadership for intelligence systems.

- As the lead RD&E SME and enterprise architect, developed intelligence systems for ground and airborne assets (manned and unmanned) to disrupt IED networks in Afghanistan and Iraq.
- Implemented and coached Agile (Scrum) systems engineering processes for user story management and implementation, resulting in three major deliverables to client ahead of schedule and below budget.
- Developed a full network security and cryptographic architecture for client, dramatically improving network security.
- Team lead managing up to 20 matrixed professionals evaluating industry and government technology efforts in "big data" and analytic technologies, and intelligent agents including SAP HANA, IBM Db2, Oracle, Tableau, Cougaar, and Palantir.
- Designed and proptoptyped a dashboard solution to track location of aircraft, ground forces, and materiel for command decision-making.
- As SE and EA SME for the Counter-IED Operations Integration Center (COIC), led RD&E efforts for cloud and virtualization, SOA business cases and architectures for Big Data, Analytics, Cloud Transition Support, DevOps, Geospatial, Information Assurance, and Security categories.
- Authored major RD&E analysis on Big Data "Five V's" for Counter-IED technologies, working project management plan for migration to Government cloud service provider, resulting in $5MM reduced infrastructure costs, improved architectural flexibility and security, and integration of machine learning and "big-data" analytical tools.
- As technical proposal SME for multiple RFP responses, was key to winning several awards for clients bidding on National Intelligence, DoD, and NASA space systems projects, as well as a UNESCO healthcare technology research study, ranging from $1MM to $25MM.

- Published multiple technical white papers on systems architectures, the "normalization of deviance," healthcare IT, data analysis, GIS, and intelligent agents.

The MITRE Corporation, McLean, VA, 2004-2009
Subject Matter Expert (SME) in Research & Development, Enterprise Architecture, Systems Engineering and Lead Information Systems Engineer, multiple projects
Led and advised technical staff while developing the system architectures for three major business processes, in accordance with systems and enterprise architecture standards.

- Directed development of Use Case and UML/SysML models, cutting future applications development time by 25% for CIA project.

- Built a risk management tool, providing substantially improved risk prediction for the client, resulting in 50% more deliverables meeting schedule and cost constraints and moving through the IV&V process.

- Advised client in articulating data and enterprise architecture requirements for HRIS, financial management, and intelligence systems using SOA design approach, allowing reuse of models, reducing development costs and schedules bu 20%.

- Developed and delivered the enterprise architecture in accordance with DoDAF standards for the newly formed Department of Homeland Security in 2006 and the El Paso Intelligence Center in 2005.

- As the technical and systems engineering subject matter expert for a $500MM National Counter-Terrorism Center (NCTC) program, identified and reported major programmatic and technical failures of the lead systems integrator and program office, ultimately resulting in program cancellation and saving the government further expense in a failing effort.

- Provided numerous presentations to technical staff, C-Suite executives, and clients on enterprise architecture, systems engineering, data analytics, software tools, and modeling methodologies for a large NSA software development and integration effort.

Northrop Grumman IT/Sterling Software, Inc., Suitland, MD, 1999 – 2004
SME and Director, Enterprise Architecture and Project Management, multiple projects
Led and coached technical staff of 20 senior engineers while developing the system architectures for three major business processes, in accordance with systems and enterprise architecture standards in a highly dynamic, wartime support environment.

- Director of project management, systems engineering and enterprise architecture for Office of Naval Intelligence (ONI) software development team of 180 engineers, on a $100 MM contract that resulted in a resource-leveled workload for engineering staff.
- Developed requirements, SOPs, and engineering criteria and design for CMMA after 9/11.
- Built a data flow simulation tool to assess sea and airborne asset locations and satellite communications and data congestion points and develop new satellite architecture to mitigate the risk of data loss and timeouts, nearly eliminating all bottlenecks and workflow stoppages.
- Defined and developed all system Interface Control Documents (ICDs). Led the definition, architecture development, and implementation requirements for fault tolerance and Continuity of Operations (COOP) planning for system tracking a full portfolio of intelligence assets, including aircraft, satellite, ground, and SIGINT.
- Initiated CMMI Level 3 and ISO 9001 Quality Improvement Plans for JDISS Program Office.
- Worked with JDISS Training team to build distributed learning training tools architecture for JDISS, CMMA, and GCCS.
- Developed requirements, architecture, documentation, work breakdown structure, schedule, and supply chain approach for worldwide intelligence collection tasking system deployment of that is still in use 18 years after initial deployment.
- Implemented an agile requirements management process that allowed for a more controlled approach to upgrades and design improvements to the threads.
- OO SE and EA SME to DoD Senior Executive personnel on object oriented design and analysis, data saturation models, process engineering, using a variety of COTS and bespoke tools.

SECON, Inc., Gaithersburg, MD 1995-1999. Lead Systems Engineer, NRO Satellite Ground Station Software Integration
Led design and integration of satellite control OO software and ephemeris RDBMS data, resulting in robust, high-reliability satellite ground station implementation

- Led code reviews, identifying significant software design issues, preventing serious compromises in satellite ground station system integrity.

- Using root cause analysis methods, including causal graphs, identified causes of design deficiencies, and implemented proactive management plans to insure design deficiencies would not reoccur.
- Lead systems engineer for R&D and subject matter expert consulting to Spectrum Astro (now part of General Dynamics) a satellite development and manufacturing company, creating a new vision and architecture for NRO satellites systems. Used a variety of analysis tools, including GDPro, STK, and COCOMO to provide in-depth development and analysis of systems architecture options.

Computer Technology Associates, 1993-1994. Rockville, MD, Process Engineer Subject Matter Expert, FBI Automated Fingerprint Identification System (AFIS)
Documented FBI and law enforcement criminal identification workflows for FBI AFIS system design.

Booz Allen Hamilton, Bethesda MD and Arlington, VA 1988-1992 Lead Sytems Engineer, Milstar Program Office and International Space Station Program Office
Developed and led project management implementations for both programs and evaluated contractor systems design efforts.

MILITARY SERVICE:
US Air Force, Commissioned Officer, 1981-1989 (six years active duty and two years reserve)
As a commissioned officer in the Air Force, directed development, and manufacturing oversight of custom UHF/SHF/EHF satellite communications hardware platform for a DoD communications satellite.

- **Director of Operations**: Led all base communications operations, including base communications center, switchboard, COMSEC account, satellite, and frequency management.
- **Chief, Combat Crew Communications**: Led aircrew ground and SATCOM communications support and training, including field deployment of communications and cryptographic resources for remote recovery and turn-around of airborne combat missions.
    - Trained bomber and tanker aircrews on communications and cryptographic services.
    - Led aircraft accident recovery effort for classified materials at a B-52 accident site.
    - Developed mission planning processes to assist aircrews with peacetime and wartime operations.

EDUCATION:
- Graduate Certificate in Enterprise Resource Planning/SAP, Regis University, 2012
- M.S. Systems Management, Veterbi School of Engineering/ISSM, University of Southern California, Los Angeles, CA, 1986
- B.A. Psychology (Industrial and Social), Rutgers University, New Brunswick, NJ, 1981

CERTIFICATIONS:
- STK Level 1 Certification, 2019
- Expert Systems Engineering Professional, (INCOSE, 2014)
- Certified Professional in Healthcare Information and Management Systems (CPHIMS), 2012-2016
- Certified ScrumMaster, 2012

CONTINUING EDUCATION:
- Microsoft Certified Solutions Developer
- ScrumMaster Training, Lithespeed
- PMP-ACP Training, Lithespeed
- Rational Systems Architect Training, IBM
- Intermediate/Advanced C++, Semaphore
- Intermediate/Advanced SQL, Oracle Systems
- Object Oriented Analysis and Design/GDPro
- Enterprise and Software Architecture Security
- STK Certification Training

SECURITY CLEARANCE: Upon Request