

**Tim Klein**  
**Engineering Leader, USAF Lieutenant Colonel, PE, CID**

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**Engineering Leader**

Engineering leader licensed and extensively practiced with breadth of experience in management and technical competencies relating to private and defense industries for leading small and large teams to deliver products from concept to fruition. Experienced senior leader setting the vector for the organization through service, example, innovation and teaching.

**Executive Experience**

TAK Industries and KleinCourses.com, Norton Shores, MI 8/2006 – Present  
**Owner & Chief Engineer**

- “Kleingineer” for the KleinCourses.com – Short Technical Courses and Materials for Dense Topics
- Solving high-power pulsed systems for nuclear fusion startup Lawrenceville Plasma Physics
- Delivered custom air quality sampler for University of Iowa to monitor workplace respiratory safety
- Subject Matter Expert (SME) for AFRL on Torque Dampening of hybrid aircraft propulsion designs
- Consultant to University of Wisconsin for a dosimeter to safeguard first responder hearing

**Military**

Air Force Life Cycle Management Center (AFLCMC) / Cyber Resiliency (CROWS) 5/2020 – Present  
**IMA to the Material Lead (ML), Lieutenant Colonel, Wright-Patterson AFB, OH**

- 20+ years of Senior Leadership tactically, operationally and strategically positioning organizations
- Leader in military cyber solutions for the Cyber Resiliency Office of Weapons Systems (CROWS)

Air Force Life Cycle Management Center (AFLCMC) / Design Planning (XZ) 7/2015 – 5/2020  
**IMA to Director of Engineer, Lieutenant Colonel, Wright-Patterson AFB, OH**

- Organized Cost/Schedule/Risk Process – Mitigated lost knowledge as members transition away
- Reorganized for standardization of 3 geographically disparate sites – People/Process/Tools sync’ed
- Strategically directed organizational functionality – Master Technical Process developed and trained

Air Force Research Laboratory (AFRL) / Aerospace Systems Directorate 9/2011 – 7/2015  
**Deputy, Power Generation Research, Major, Wright-Patterson AFB, OH**

- Developed AF corporate Future-Game war-game strategy – Addressed SECDEF concerns
- Lead & coordinated senior review for AFRL tech-directorates for Title X War Games
- Founder of National Hypersonics Team – Directing research in Hypersonics between AF & NASA
- Motor/Generator Electronics Drive Design Expert – Directing research for power-pack system design

Air Force Research Laboratory (AFRL) / Sensors Directorate 6/2003 – 9/2011  
**Program Engineering Lead, Captain, Wright-Patterson AFB, OH**

- Engineering Lead for \$15M Cat-I ATD next-gen radar program fabrication – Completed above specs!

- Radar Systems Expert – Defined architecture for successful \$15M Cat-I ATD radar system test-bed that eventually enabled the 5G cell technology now in use
- Authority for AFRL Outdoor Radar Range – Integrated several key radar assets to create \$20M+ Range Test-bed in a successful move from Rome AFS, Rome, NY

Space and Missiles Systems Center (SMC) / Patrick Detachment 8 (CWP)

6/2001 – 6/2003

**Project Engineer, 2<sup>nd</sup>-1<sup>st</sup> Lieutenant, Patrick AFB, FL**

- Eastern Launch Range Coordinator between SMC and Ops for \$100M+ Range Standardization & Automation (RSA-II) program for 100% launch success and integration
- Ensured successful launch of first EELV (Atlas-V rocket) utilizing upgraded control system – 4500x data-throughput increase to support new rockets, such as the SpaceX Falcons!

### **Professional Experience**

L-3 Communications Combat Propulsion Systems (CPS), Muskegon, MI

9/2006 – 6/2019

**Engineering Specialist**

- Lead for vehicle mobility; SME & Design Engineer for L-3's HMPT Transmission with US Army TACOM/TARDEC and FMS customers
- Lead Electrical Engineer for \$50M/yr Turret Drive Legacy Systems – Awarded additional \$2M
- Specifically appointed lead for complex \$6.8M 4-yr 6-engineer redesign for Army TACOM
- Software Engineer Manager of 2 people leading a \$20M 3-yr Next-Gen Transmission for US Army
- Headed Dept of State MLA between L3-CPS in US and L3-ES in Canada for \$10M tech transition
- Electrical Engineering Lead for Army TARDEC/TACOM Generator for Abrams, Bradley, & Stryker

### **Qualifications**

- Licensed PE (Electrical) in Michigan (License #: 6201054537) & Florida (96938); NCEES # 23-631-26
- Certified Interconnect Designer (CID) per IPC (Certification #: CID-19050822461)
- Certified DoD Acquisitions SPRDE-SE Level 2 and SPRDE-PM Level 2; Clearance in JPAS
- Primary Inventor on Patents: 7482273, 7566889, 7626134, 10560776, 11614354
- Skilled in MATLAB/Simulink, C/C++, FORTRAN 90/95, VHDL, SPICE, LabView and more

### **Education/Training**

**Air University (AU)**

Air Command and Staff College (ACSC)

Squadron Officer School (SOS)

**Air Force Institute of Technology (AFIT), Wright Patterson AFB, OH**

MS in Applied Physics

Awarded Dayton Area Graduate Studies Institute Scholarship

Plasma Physics and Aeronautical Engineering Computational Fluid Dynamics for Flow Control

Thesis: "Macroscopic Computational Model of Dielectric Barrier Discharge Plasma Actuator"

**Michigan Technological University (MTU), Houghton, MI**

BS Electrical Engineering, Minor Aerospace Sciences – Cum Laude;

Superior Performer (Top 20%) at Field Training; "Blue Chip" - Top 15% ROTC Class