

# Daniel M. Cobb

## Career Summary

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- ❖ As the **Systems Engineering Lead** for Mayhem, guided the architecture and requirements development into a successful System Requirements Review (SRR).
- ❖ Developed **Organizational MBSE Modeling Guides and Methodology**
- ❖ Captured and Tracked **project and program metrics**, technical schedules, and budgets.
- ❖ Lead highly trained teams of systems engineers on **complex defense programs** such as Army Integrated Air and Missile Defense, Air Force Mayhem project, and Army Multi-Mission Launcher.
- ❖ Systems engineering experience **across system lifecycle** from concept development through sustainment.
- ❖ Developed a **prototype** command and control shelter including CAD and analysis, then executed the development and **project management** to replace a failing design for major ACAT 1 program.
- ❖ Introduced **Model-Based Systems Engineering (MBSE)** into traditionally document-based efforts to reduce requirement verification effort and increase architectural understanding across the programs.
- ❖ Established simulation labs for MBSE and **System-of-System (SoS) integration**.
- ❖ Provided MBSE **Training and Coaching**.
- ❖ **Active INCOSE Member** and former Huntsville Regional Chapter Communications Chair.

## Education

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MS IN SYSTEMS ENGINEERING | 2017 | NAVAL POSTGRADUATE SCHOOL

MS IN BUSINESS ADMINISTRATION | 2009 | UNIVERSITY OF TEXAS A&M- TEXARKANA

BS IN MECHANICAL ENGINEERING | 2007 | UNIVERSITY OF ALABAMA IN HUNTSVILLE

## Certifications and Clearance

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ACTIVE DOD SECRET CLEARANCE

INCOSE CERTIFIED SYSTEMS ENGINEERING PROFESSIONAL (CSEP)

OBJECT MODELING GROUP OCSMP LEVEL 1

DAWIA LEVEL III CERTIFIED ENGINEERING

DAWIA LEVEL II CERTIFIED PROGRAM MANAGEMENT

MIT ARCHITECTURE AND SYSTEMS ENGINEERING CERTIFICATE

## Skills and Areas of Interest

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- ❖ Subject Matter Expert in Systems Engineering and related modeling techniques.
- ❖ Proficient in Cameo Enterprise Architect and Rational Rhapsody (tools) as well as SysML and UPDM (languages).
- ❖ Attempt a broader understanding of systems engineering and design through novel data integration methods.
- ❖ Leading teams and developing the careers of junior systems engineers.
- ❖ Learn new techniques, explore systems engineering applications in other domains to apply to defense systems.

## Detailed Experience

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**Company: Dynetics Inc./Leidos Inc.**

**May 2021 – Present**

**Project/Office: Mayhem**

**Title: SYSTEMS ENGINEERING LEAD**

- ❖ **LEAD** the development of systems engineering processes, multidisciplinary design and optimization planning, and the digital engineering ecosystem for the Mayhem hypersonic program.
- ❖ **MENTOR** and **TRAIN** junior systems engineers in SE, modeling and architecture, and system development.
- ❖ **DEVELOPED** a Digital Engineering Reference Architecture model to lead Dynetics/Leidos latest programs into a common, adaptable framework for data integration and Digital Twin development.
- ❖ **SERVED** as the primary digital engineering and systems engineering expert for proposals such as Mayhem and HLS.
- ❖ **GUIDED** multiple proposals including the lead for digital engineering and systems engineering on a winning Mayhem proposal.

**Project/Office: Human Lander System**

**Title: MODEL-BASED SYSTEMS ENGINEERING LEAD**

- ❖ **CREATED** MBSE fundamental artifacts for a burgeoning organization including a Cameo modeling profile that contains system and domain stereotypes, risk, opportunities, action items, and trade studies.
- ❖ **ESTABLISHED** the conceptual MSBE model and led a team of SEs for the NASA Human Lander System Sustaining missions while serving as the Lead Model-based Systems Engineer.
- ❖ **PROVIDED** guidance and insight on standard systems engineering practice to multiple programs including Enduring Shield, VADR, and Golden Talon.

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**Company: Modern Technology Solutions, Inc.**

**July 2019 – May 2021**

**Project: MDA/DES Ground Test Integration System Simulation (GTISS)**

**Title: DIGITAL ENGINEERING TECHNICAL LEAD**

- ❖ **LEAD** systems engineering and MBSE proposals for MTSI business development.
- ❖ **CREATED** and **REVIEWED** systems engineering artifacts for other MTSI proposal efforts.

- ❖ **BRIEFED** potential customers on company capabilities.
- ❖ **PROVIDED** systems engineering training and coaching to MDA and MTSI employees.
- ❖ **ALLOCATED** and **BALANCED** technical hours to engineers for AFRL effort.
- ❖ **DERIVED** requirements at each architecture level based on the architecture models.
- ❖ **MANAGED** a team of modelers in the creation of a new GTISS model.
- ❖ **PROVIDED** leadership and expertise in SysML to the MDA customer to create a coherent and translatable product.
- ❖ **PARTICIPATED** in model and requirement reviews and provide feedback to engineering change proposals.
- ❖ **MANAGED** the creation of a 3-layer architecture used to amplify Interface Control Document message content.
- ❖ **DERIVED, MANAGED, and IMPROVED** requirements at each architecture level based on the architecture models.
- ❖ **CREATED** architecture models of the future GTISS environment based on current requirements document.

Company: CCDC AVMC

Sep 2009 – July 2019

Project/Office: Integrated Air and Missile Defense PMO

Titles: **LEAD MODEL-BASED SYSTEMS ENGINEER, EXTERNAL INTERFACES ENGINEER, HARDWARE INTEGRATOR**

- ❖ **DEVELOPED** the modeling hierarchy needed to successfully reach Milestone C.
- ❖ **LEAD** a team of modelers in the development of a multi-level, high complexity system model.
- ❖ **PRODUCED** requirements change recommendations to support new System Specification revision.
- ❖ **DEVELOPED** architecture models that support software specification verification in preparation for Functional Configuration Audit.
- ❖ **PROVIDED** insight into the roles and duties of the systems engineering team in an agile development environment.
- ❖ **LEAD** systems engineering and integration test for IAMD Program Office for proof of interoperability with external interfaces.
- ❖ **MANAGED** system of systems integration lab missions including Link-16, JREAP, Mission Command and THAAD/C2BMC.
- ❖ **COORDINATED** the planning and interface development with other Army offices, Air Force, MDA, PEO M&S Program Office, AMRDEC Software Engineering Directorate and integration labs on issues involving Link-16 and integration activities.
- ❖ **PREPARED** and **DELIVERED** briefings and written reports to management to keep the Battlespace Management Integration (BMI) Product Manager and EOC Product Manager aware of technical issues.
- ❖ **LEAD** multifunction technical working groups focused on integration of system interfaces, design, and production.
- ❖ **CREATED** courses of actions to integrate AMDPCS with IAMD and established the future direction of program integration between IAMD and other Army weapons and sensors.
- ❖ **PLANNED** and **EXECUTED** engineering efforts for the Engagement Operations Center (EOC) Product Office.

- ❖ **PROVIDED** technical expertise for integrated product teams and contracting efforts in the areas of systems engineering, EOC design, software development, and system integration.
- ❖ **MANAGED** the review and acceptance of the technical data package in accordance with the data item description.
- ❖ **ASSISTED** in writing and reviewing technical contract letters, statements of work and contract data requirements lists.
- ❖ **IDENTIFIED** a discrepancy between the technical data package (TDP) received and the one delivered by the prime contractor and lead the negotiation and management efforts to produce a more robust and complete TDP to support the Physical Configuration Audit (PCA).
- ❖ **LEAD** verification effort for system requirements.
- ❖ **COORDINATED** with other component acquisition programs and user community to jointly resolve issues related to EOC shelter design, performance, and integration.
- ❖ **COMPLETED** stakeholders needs analysis to capture updated user requirements.
- ❖ **LEAD** a Should Cost effort which developed into the creation of a prototype command and control shelter which increased system capability and reduced total system cost.

**Project/Office: Center of Model Based Acquisition and Technology (CoMBAT)/Multi-Mission Launcher (MML)**

**Title: LEAD MODEL-BASED SYSTEMS ENGINEER**

- ❖ **CREATED** a new CoMBAT Modeling Guide, with responsibility to write a majority of the document.
- ❖ **DEVELOPED** a new system level model of MML that guided software development, testing, and integration.
- ❖ **CREATED, PLANNED, and PROVIDED** training, procedures, and modeling guidance to government and support contractor personnel.
- ❖ **DEVELOPED** the Model Based Systems Engineering products required for the Multi-Mission Launcher Project Office, including use case diagrams, structure diagrams, behavior diagrams, and requirements diagrams with tracing.
- ❖ **DELIVERED** systems engineering leadership and expertise in the development of systems engineering models for Unmanned Air System (UAS), the Multi-Mission Launcher (MML) Program, and other missile and aviation programs.
- ❖ **REPRESENTED** my command in a joint cohort to identify Digital Engineering best practices and lead the development of an MBSE model to interpret those best practices.
- ❖ **PROMOTED** CoMBAT capabilities to potential customers and the greater MBSE community in discussion forums.
- ❖ **PERFORMED** program management role for CoMBAT, including cost, schedule, and performance responsibilities.

**Project/Office: Joint Air-To-Ground Missile PMO**

**Title: SYSTEMS ENGINEER**

- ❖ **LEAD** an IPT with responsibilities for missile shipping and storage container identification, testing, and logistics.
- ❖ **SUPPORTED** the development of missile test development including requirements development and verification.

- ❖ **PROVIDED** systems engineering leadership and expertise in the areas of JAGM missile guidance section development, test incident report tracking and correction, test set development, and platform integration.
- ❖ **REVIEWED** and provided disposition of JAGM contract actions, Statements of Work, Engineering Change Proposals, and Test Incident Reports.
- ❖ **CREATED** a tracking database for test and simulation assets to plan simultaneous efforts with limited availability.

#### Other Project/Office: Matrix Support to Multiple Programs

#### Other Positions

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Company: Army Material Command  
Company: Johnson Controls

July 2008 – Sep 2009  
Jan 2008 – July 2008