

THOMAS MCANDREWS

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RANGE SYSTEMS ENGINEER | ENGINEERING TECHNICIAN | ASSET MANAGER

Systems Engineer and Master Radio Frequency Technician with combined experience in airborne telemetry, range systems, and instrumentation for the National Aeronautics and Space Administration (NASA) and the Department of Defense (DoD). Led systems development, test planning, field troubleshooting, and integration of complex telemetry and tracking architectures. Demonstrated strengths in technical leadership, failure analysis, hardware and software development, and operational readiness. Authored peer-reviewed technical work and received industry and organizational awards for system design and mission support.

- Hardware/Software Installation
- Test Engineering
- System Validation
- Telemetry Systems
- Test Automation
- Configuration Management
- Maintenance & Procedures
- Employee Training
- Office/Program Management

EDUCATION & CERTIFICATIONS

Bachelor of Science, Industrial Technology | Southern Illinois University Carbondale

Associate of Applied Science, Electronic Systems | Community College of the Air Force

PROFESSIONAL EXPERIENCE

Post 543 American Legion | Southport, NC

September 2025 - Current

Web Developer (<https://sjveteransmemorial.org>)

- Conceived and developed an entirely new search tool for visitors of the St. James Veteran's Memorial site to pinpoint the exact location of their purchased bricks. Includes a drop-down allowing selection by any applicable field. Upon selection, displays an image of their brick as well as a graphic map with their brick highlighted. Also allows sharing of the brick image, includes hyperlink to facilitate download of the new brick purchase form and provides a method to download the entire purchased brick spreadsheet for their perusal.

Bella Cucina, LLC | Southport, NC

March 2004 – September 2025

General Manager

- Designed and operated a new food-service business, sustaining profitable operations over 21 years and managing day-to-day financial, operational, and personnel activities.
- Developed database software to expedite automated ordering and inventory control, which mitigated manual ordering efforts and improved stock replenishment accuracy.

Tybrin (Jacobs Engineering) | NASA Neil A. Armstrong Flight Research Center, CA

November 2001 – March 2004

Range Systems Engineer

- Served as principal engineer for the National Aeronautics and Space Administration (NASA) and Department of Defense (DoD) Enhanced Flight Termination System (EFTS) development program for use across national and state ranges.
- Developed system test plans, led test execution, analyzed results, and prepared formal test reports to verify system performance against requirements.
- Led a national frequency interference study, designed the test strategy and diagnostic software, and identified receiver shortfalls that had caused unintentional aerospace vehicle loss.
- Authored technical documentation and coordinated cross-organizational reviews to support program decisions.

Spiral Technologies (Sparta) | NASA Neil A. Armstrong Flight Research Center, CA

April 1999 – November 2001

Telemetry Systems Engineer

- Redesigned tracking equipment configurations and revised preflight and periodic maintenance procedures for multiple range systems to improve reliability and maintainability.
- Operated, troubleshooted and repaired telemetry tracking systems, including antennas, receivers, and data recorders to support mission-critical launches and tests.

United States Air Force | Wright-Patterson AFB, OH

April 1997 – April 1999

Airborne Instrumentation System Analyst

- Led flight operations examinations and directed calibration and operation of airborne telemetry tracking systems during NASA rocket launches and Department of Defense missile tests.
- Served as integration manager overseeing equipment modifications, upgrades, and procedural changes across instrumentation suites.
- Supervised acquisition and fielding programs for airborne cruise missile tracking systems and trained aircrew and technicians on system operation and maintenance.

TECHNICAL SKILLS

Office Suite: Advanced Excel and Access DB Developer using Visual Basic

Programming Languages: Python, MySQL, LabView; Object Pascal; Assembly

Engineering Tools: Test engineering applications; Telemetry and RF diagnostic tools

Hardware: PC fabrication; Hardware and software installation; Can repair circuits to component level

Core Competencies: Troubleshooting; Software development; Technical documentation; Problem-solving; Project coordination