

Working Smarter Not Harder to Meet MOSA Mandates

TANGRAMFLEX 

The Challenge

Across the DoD, the ability of new capabilities to be integrated with legacy platforms and systems continues to be a time consuming and costly battle. Initiatives focused on Digital Engineering (DE), Model-Based Systems Engineering (MBSE), and Interoperability continue to be invested in, however implementing these processes can be challenging and constrained by black-box solutions and systems that have been maintained for 30+ years. As systems continue to grow in complexity and the evolution of software moves at speeds unobtainable to control, the DoD must look for solutions that will rapidly advance and support their mission for interoperability at the edge.

The Problem

Our Government partner designed their airborne resource management system human-machine interface (HMI) to meet Modular Open System Approach (MOSA) mandates and comply with the latest version of the Air Force's Open Mission System (OMS) standard to expedite fielding and get the solution flying. However, the command and control (C2) component relied on a non-OMS message standard, meaning it was not compatible with the HMI. This left our partners with two choices; 1) change their system to integrate with the legacy C2 but lose MOSA intent, or 2) find a way to integrate both components without changing their standards. Luckily for the Government, Tangram's software integration platform Tangram Pro™ was designed specifically to address and expedite option 2.

The Approach

Tangram Pro creates adapters that allow components with different standards to communicate and work together, without changing the systems themselves. Tangram's software engineers develop the necessary message transforms and automatically generate the interface 'glue' code that allows the legacy C2 system speaking non-OMS to communicate with the newly-developed OMS-based airborne management system for a seamless integration.

Tangram Pro eliminates the tedious, often error-prone task of writing integration code and provides a solution that saves hundreds of man-hours. In weeks instead of months or years, the code flew in a flight test.

“Without the Tangram Team and using their software solution to get our disparate systems talking to each other, we wouldn't have been able to meet the flight test requirements. They are not only a top-notch team, but their platform saved us from being left on the sidelines”

- DoD Customer

Why It Matters

The DoD's ability to quickly integrate new capabilities into fielded systems to meet the rapidly-evolving requirements of today's Fight is critical for mission success. With limited time and resources, it's critical to utilize tools that help update code, reconfigure systems, and avoid errors while ensuring security. **Tangram Pro provides the ability to rapidly generate adapters for any data standard and maintain or update that code to meet evolving mission needs.** This provides the DoD with a solution that promotes MOSA, avoids touching 'black boxes', and gets code flying today- when it matters.

Learn more on how we can partner with you to rapidly integrate new software capabilities at tangramflex.com