

QuantaDyn and QuantaDyn Technical Services Corporate Capabilities



QuantaDyn Corporation is a small, privately held business that was founded in November of 2000 by a group of engineers with extensive experience in the training and simulation industry. The company specializes in systems integration and hardware, software, and systems development with a focus on:

- Open architecture, non-proprietary hardware and software solutions
- High fidelity, physics based software simulation models
- Robust, maintainable system designs
- Consistent, repeatable, and practical processes that provide value to our programs and customers

QuantaDyn has won contracts with the U.S. Navy, U.S. Marine Corps, U.S. Air Force, and U.S. Army. The company has successfully executed on commercial aircraft simulator programs and has delivered on Direct Commercial Sales (DCS) to foreign customers as well as Foreign Military Sales (FMS). QuantaDyn has delivered training system devices to over 37 states in the U.S. and over 8 countries worldwide. Through the years, QuantaDyn acquired expertise in all aspects of training simulator design, development, and validation.

Key capabilities include:

- Host computer software development
- Real-time executive, physics based models, weapon and platform system models
- Cueing and tracking systems development and integration
- Visual, motion, control loading, aural
- Trainer validation
- ATP and QTG development, automated Performance and Flying Qualities (P&FQ) validation, FAA certification, SimCert
- Instructor Operator Station development
- User interface, graphical displays, maps, cockpit repeaters
- Avionics and military hardware simulation, stimulation, and emulation
- GFE aircraft avionics, mission computers, ground based military equipment
- Simulator networking
- DIS, HLA, and standards development

QuantaDyn has direct training system development experience with fixed wing and rotary wing aircraft, turboprop, jet, and transport aircraft, aerial refueling, ground and airborne communication systems, and Close Air Support (CAS) and Call for Fire (CFF) instruction for Joint Terminal Attack Controllers and Forward Observers.



PROVEN

RELIABLE

INTEROPERABLE

SCALABLE

MODULAR

About QuantaDyn Corporation

QuantaDyn supplies simulation and training systems to the U.S. military and coalition partners around the world. Our goal is to provide modern, innovative answers to training needs, while taking full advantage of commercial-off-the-shelf (COTS) technology. Our experience includes virtually all phases of training device development for Joint Fires as well as both fixed and rotary wing aircraft for use on military and commercial programs.

What are our QCapabilities?

Software Development

DIScover

- Commercial Off the Shelf (COTS) software application developed to support the Advanced Joint Terminal Attack Controller (JTAC) Training System (AJTS) device
DIScover and associated plugins are used to interface with nearly all components of the AJTS system, including the Operator Station, Projection Display system, Emulated Military Equipment, the Image Generator, and the Semi Automated Forces software

UAFT

- Software application designed to support the development and validation of simulator flight dynamic models
- UAFT was designed from the ground up with the support of NAVAIR Aero Engineers to provide accurate and repeatable performance of standard flight test maneuvers for fixed and rotary wing aircraft
- UAFT is highly configurable so it can be easily integrated with new or existing training devices.

MH-60 and SH-60B OFT

- QuantaDyn provided software development support and subject matter expertise to Lockheed Martin in support of the MH-60 and SH-60B OFT development

For more information on the products above, see QApplications

System Integration

BOWST and BOSS

- The Boom Operator Trainer and Simulation System was required to provide integration and test of the Boom Operator Weapons System Trainer (BOWST) I device, deliver the Bowst II and III devices, the Boom Operation Simulation System (BOSS) prototype, and the Distributed Mission Operations Support design.
- The QuantaDyn KC-135 Boom Operator Trainers provide a realistic visual representation of air refueling that enables the student to identify visual cues from the air refueling boom and receiver aircraft that enable them to maintain proper situational awareness during air refueling operations

For more information on the products above, see QFlight

Training System Development

Joint Fires Simulation Products

- AJTS is an off-the-shelf product that consists of a domed visual display system with high resolution projectors, a powerful and intuitive Computer Generated Force (CGF) / Semi-Autonomous Force (SAF) application, a high fidelity, multi-spectral Image Generator (IG) system, a dynamic aural cueing system, and a full suite of emulated, stimulated, and virtual Trainee Military Equipment (TME).
- Bringing the real world to life for unrivalled Joint Fires training: The JF STS is a state-of-the-art Indirect Fire and Close Air Support (CAS) training system, used by the U.S. military and coalition partners around the world, to train and support their JTAC, FAC, FO and JFO communities.

For more information on the products above, see QFires

Aviation Simulation Products

- MMCT** - QuantaDyn developed the Multi-Mission Crew Trainer (MMCT), in conjunction with Randolph Trainer Development, for the Air National Guard. The MMCT provides an enhanced capability to support pilot and co-pilot training in a full range of flight modes that incorporates multiple navigation systems.
- RPASS** - The RPASS can operate as a fully capable system to include an Instructor Operator Station (IOS) or it can be easily networked into any of the devices in the QuantaDyn Q Fires product line, creating a solution to train both RPA crews and JTAC's in one collective training scenario.

For more information on the products above, see QFlight

Aerial Refueling Training Products

- Micro Boss** - The Micro Boom Operator Simulation System (Micro-BOSS) was designed as a table top training simulator for KC-135 Boom Operators. It incorporates all of the software features and functionality of the Air National Guard Boom Operator Simulation System (BOSS) as well as the Air Education Training Command (AETC) Boom Operator Weapon System Trainer (BOWST).

For more information on the Micro Boss, see QFlight

Maintenance, Sustainment

- QTSC** - QD's Test and Validation personnel evaluate requirements to determine compliance and quality assurance necessities of assigned programs. They also perform in-depth research and development to ensure a device performs to the product user/operator's desires in addition to specification.
- Delivered by QuantaDyn across all divisions of our capabilities; excelling in System Upgrades, Training System Test & Validation, and Cyber Security

For more information on the above, check out QServices