DFB

DOGFIGHT BOSS

SIMULATION

HARDWARE SOLUTIONS

FROM A STANDALONE MODULE
TO A COMPLETE SOLUTION

Commitment to Excellence
At Dogfight Boss, we are committed to producing high-quality, cost-effective products that deliver exceptional realism and immersion in flight, ground, and naval training and simulation.

Advanced Technology Integration
We use state-of-the-art technology to create accurate simulators of aircraft, ground vehicles, and instruments, with seamless integration into existing simulation systems and compatibility with third-party software.

Our Team
Located in Brno, our passionate team combines extensive expertise in simulation development to drive innovation in the industry.

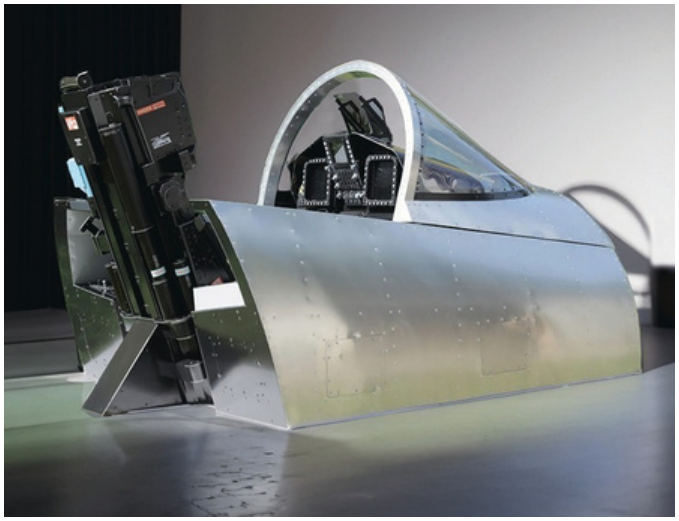
DEVELOPED BY DOGFIGHT BOSS

Dogfight Boss s.r.o. | Czechia | Lukas Homola CEO | +420 603 146 014 | dbinfo@dogfightboss.com | www.dogfightboss.com

Czech President Petr Pavel inspecting DFB cockpit

FULL COCKPITS

Turn-key solution with an in-house manufactured fuselage



MODULAR SYSTEMS

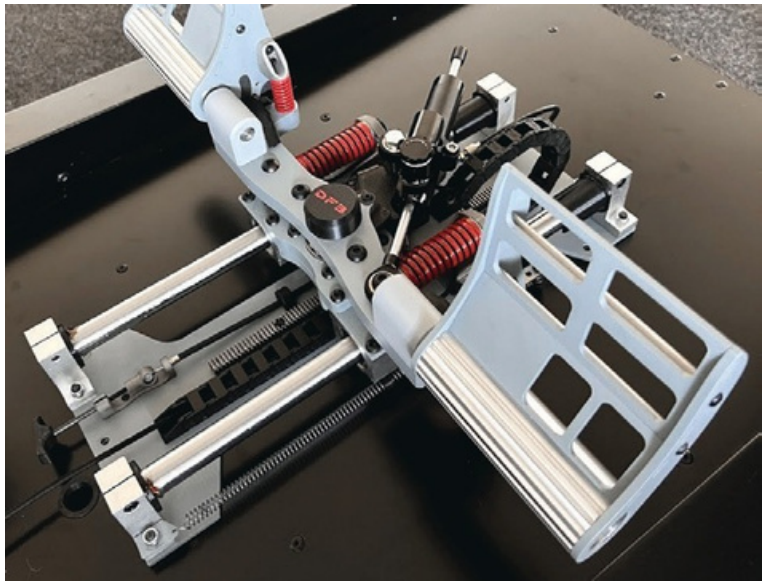
Any part of DFB Hardware can be used as an independent module

F-18C Dashboard with Aux Panels

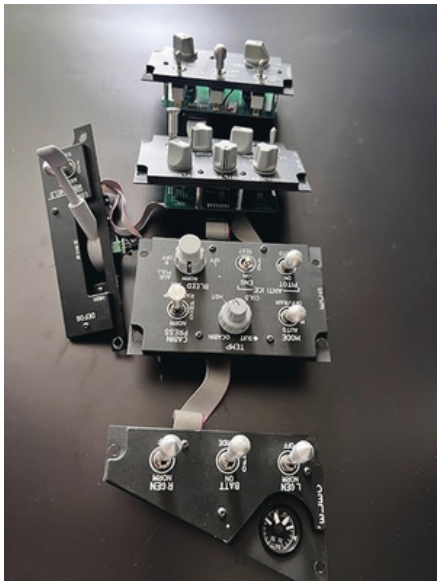
F-18C UFC Module

Genesys IDU-680 EFIS

F-16 Dashboard



F-16 Rudder pedals with correct forces



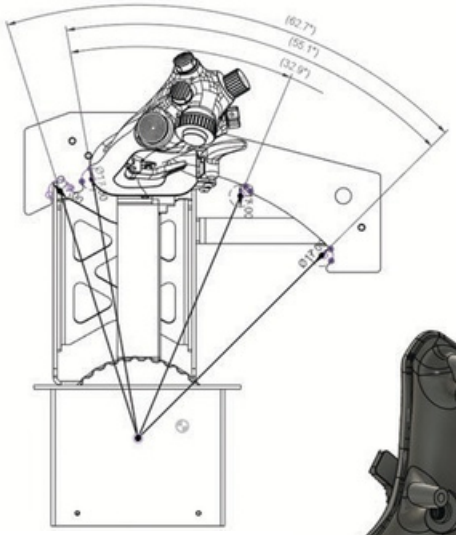
F-18C Instrument panels

F-16
HOTAS

F-16 Force-sensing built-in stick Base

F-16 Force-sensing stand-alone stick Base

Most of the components, including the Force Sensing Thumbstick and Slide Switches, are developed in-house based on feedback from real pilots. This ensures accurate replication of the authentic feel, including the precise tensions and distinctive clicks of an actual F-16 throttle grip. Part of the assembly are original OTTO switches analogous to original aircraft. Thumbstick cap can be modified to fit an appropriate block (Inversed „China hat" or „Spider web").
The grip body features a multi-layer coating and a dual-compound finish, providing exceptional durability. All labels are laser-engraved. In the main throttle arm contains the floodlight.



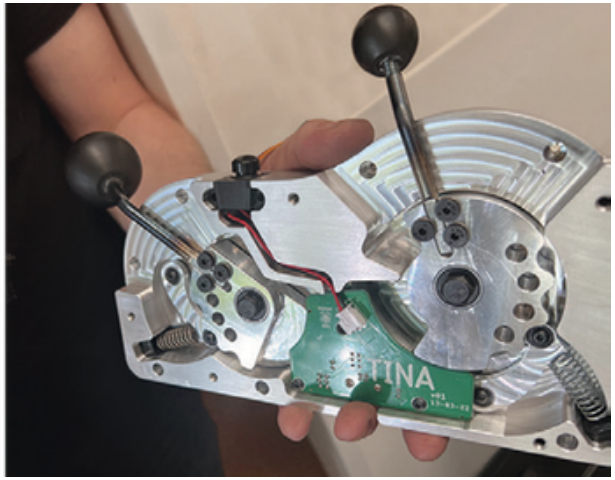
F-16 Throttle module

Custom made Force Sensing Thumbstick

SIMULATED DEVICES

DFB is able to develop any simulated hardware for training

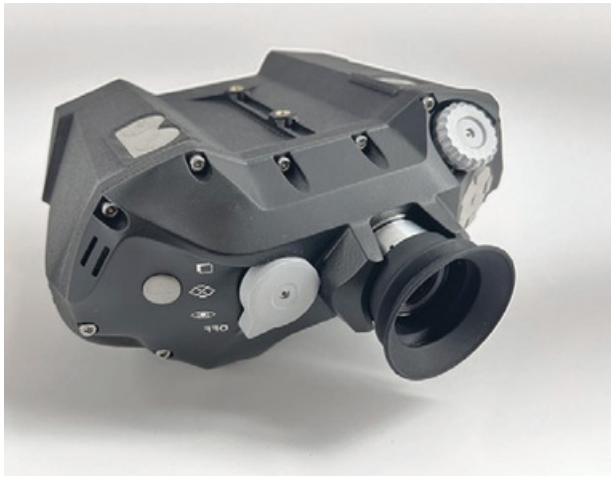
Tank driver on 6DOF motion platform



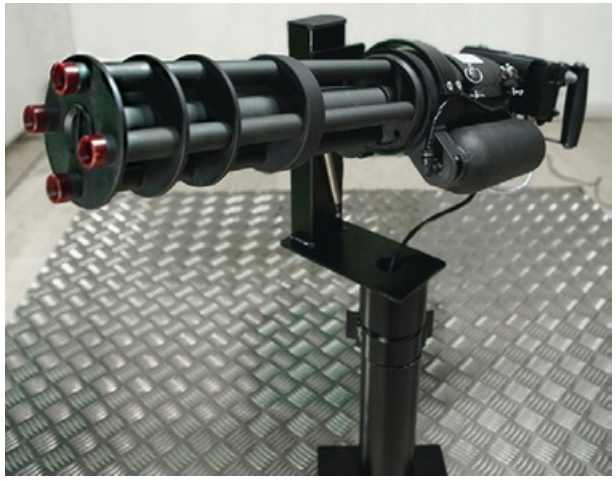
Tank gear shift

JTAC binocular Jim Compact

Desktop tank gunner



JTAC monocular Moskito TI



Door gunner

MISSION SYSTEMS
LASER
ARMAMENTO

INSTRUMENT PANELS

Every panel is custom-made in DFB

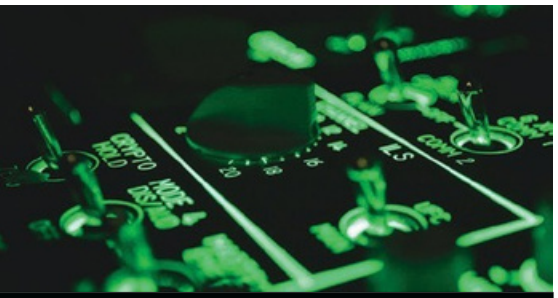
We offer high-quality, standalone instrument panels as key components of our simulators, ensuring realistic haptics and visuals for superbly authentic training experience.

All input actuators are THT-mounted on the PCB and panel baseplate for rigidity. Therefore, some actuators are mounted on the adapter board to achieve a uniform distance from the panel.

All instrument panels are acrylic with backlit text and graphics.

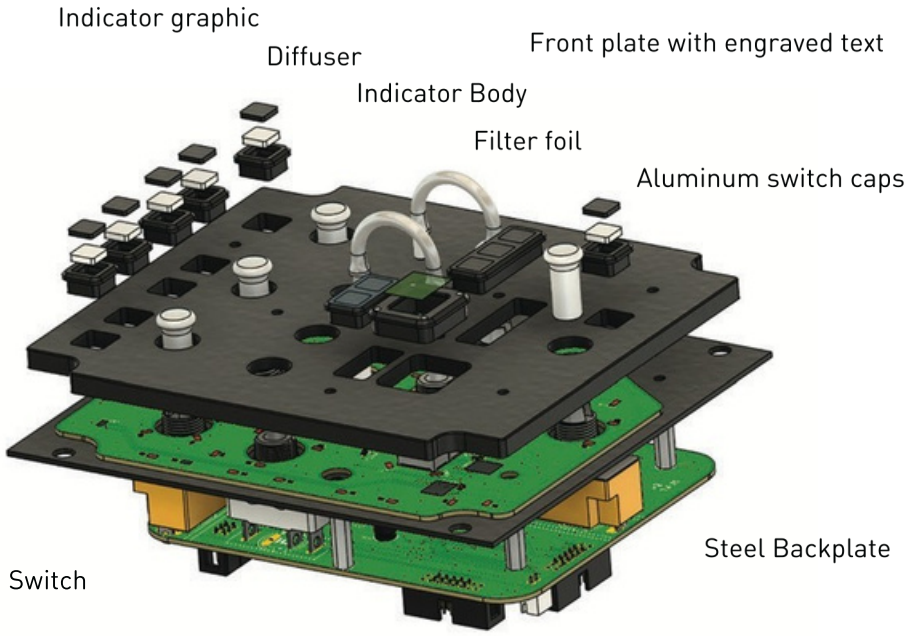
All baseplates are 1.5 mm (0.059 inches) aluminium sheet.

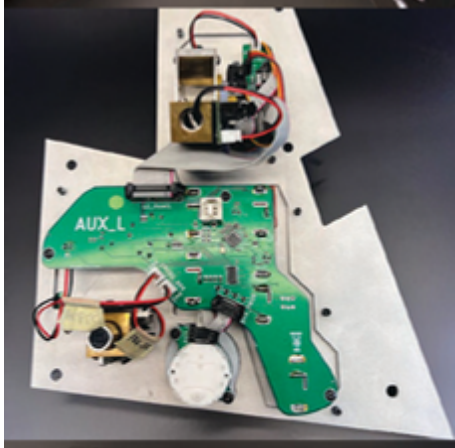
Knobs are custom-made with a backlit center line.



Each instrument panel is an independent module

PLUG AND PLAY





SOFTWARE

DFB Controller is software that provides a bridge between DFB hardware and simulation software, transferring values such as switch positions, encoder clicks, gauge deflections, numeric display contents, and so on. This is done using a TCP/IP connection between the DFB Controller and the simulation software.

FIRMWARE

Dogfight Boss simulators are equipped with controllers developed exculusively in-house, which enables us to have centralized access, fast response, and seamless firmware updates.

MIDDLEWARE

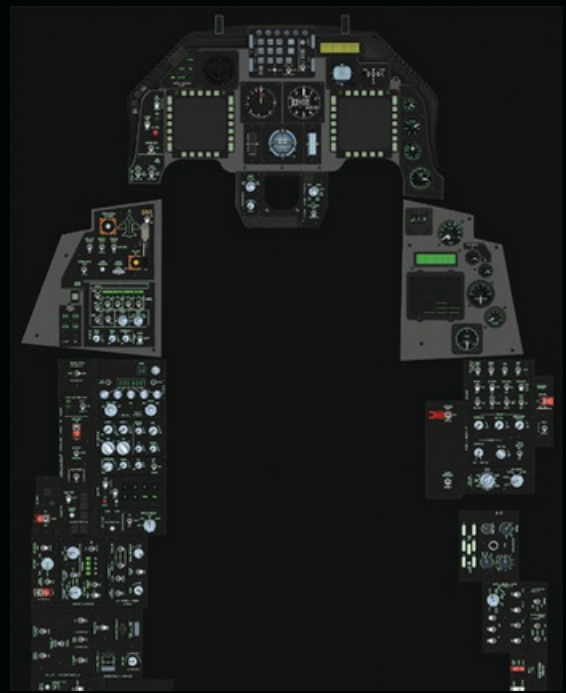
Manage all connected DFB hardware and direct communications to the growing portfolio of supported simulated environments.

DFB INSTRUCTOR / OPERATOR STATION (IOS)

Connect all Dogfight Boss devices to IOS via LAN. The Instructor can view all devices via graphical layouts, remotely control inputs, and monitor all displays in real time.

GFX layer

The DFB Controller has a hardware visualization layer or GFX layer. It is possible to toggle the controls with a mouse, allowing the integrator to work on the communication (or test it) without connecting the hardware. It's also possible to change values using the SimPins watch window, where the integrator can enter values directly, which is mainly useful for testing hardware without the simulation software.



INTEGRATED IMAGE GENERATORS

Mission Systems SA delivers the most powerful and immersive networked training and rehearsal Mission Combat Architecture (MCA) in the world. Englobing the entire spectrum of military operations across all environments, this massively networked and true-to-life simulation ensures your goals of warrior proficiency and mission success.

SimiGon is a provider of true to life simulation software used in real-life virtual training and services to the Government and Military as well as Logistics providers.

Arenalogic delivers operationally proven 4-ship F-16 training centers that connect simulators and live aircraft in a unified Live – Virtual – Constructive (LVC) environment. Purpose-built for emergency and tactical missions, it provides unmatched realism, interoperability, and combat-ready training capability.

The NOR platform brings the cutting-edge technology, scalability and accessibility of commercial game engines to the high-end military training and simulation market, creating an ultimate-fidelity physics-based military simulator.

Prepar3D, pronounced “prepared”, is a visual simulation platform that allows users to create training scenarios across aviation, maritime and ground domains. Prepar3D engages users in immersive training through realistic environments.

In 1995, the X-Plane community of pilots, gamers, and aviation enthusiasts around the globe has prized our first-principles physics, realistic aircraft systems, and the experience that only decades of real-world flying provides.

Aechelon Technology, Inc. is a leading Silicon Valley-based provider of defense-oriented image and data generation solutions. Synthetic Reality is the ultimate form of visualization – with 8K imagery generated in real-time, using real-world physics and multi-domain sensor perspectives while leveraging artificial intelligence and machine learning to precisely recreate terrain, weather, and more. All Firm Fixed Price (FFP). All Commercial.

VBS4 is a whole-earth virtual desktop trainer and simulation host that allows you to create and run any imaginable military training scenario.

CONSTRUCTION

Lightweight and portable, or heavy and indestructible

COMPOSITE

The modular training platform is a key part of pilot training, mainly made of durable Dibond sandwich material. It allows easy seat changes across different aircraft types, such as airplanes and helicopters. It can be fitted with HOTAS or cyclic and collective controls. The platform also has adjustable DFB rudder pedals for proper pilot fit.

STEEL

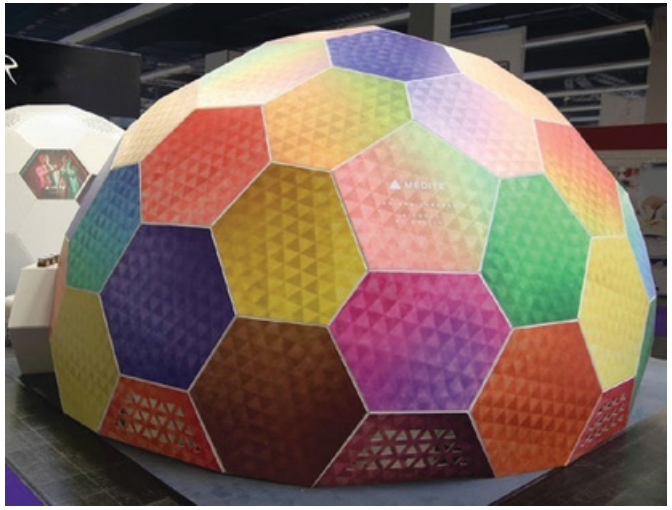
Another DFB solution is a steel construction without compromises. For use cases where dismantling the simulator isn't necessary, DFB provides a welded steel structure with powder-coated parts. The simulator's exterior is simplified, but its interior closely mimics the actual aircraft. The cockpit is equipped with a sliding seat for easy access.

VISUAL SYSTEMS

Various solution for the visualisation

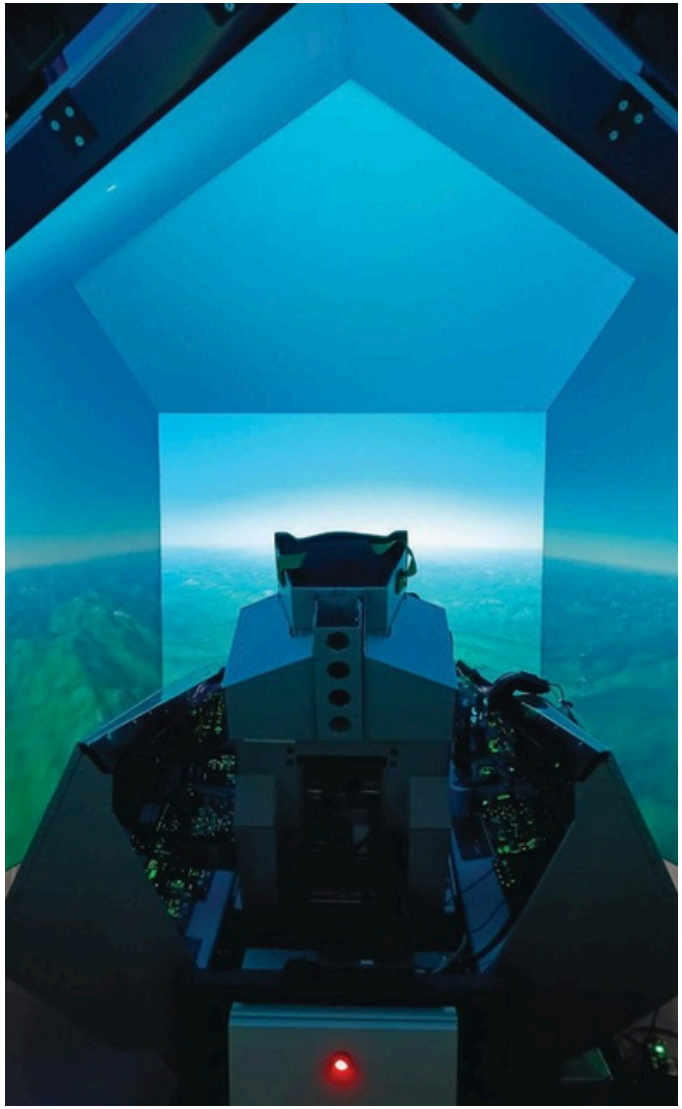
Mixed Reality Headset

150-270 Curved screen



Full Dome, geodesic or spherical solution

TV Setup



Truncated Dome

SUCCESS STORIES

UKRAINE

"In 2024, a Czech cockpit simulator company, Dogfight Boss, has bought itself some valuable PR with a donation of a complete F-16 training cockpit — accompanied by a Varjo XR-4 headset — to help train Ukrainian pilots to use their new F-16s." (Forbes US)

VARJO

"We received an exciting delivery, an F/A-18C/E replica cockpit by Dogfight Boss — integrated with the Varjo XR-4 headset.".

UNIVERSITY OF DEFENCE

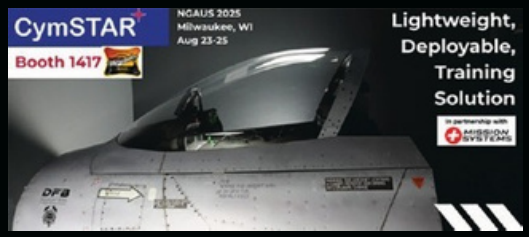
DFB delivered 2 fully functional F-18C cockpits to the Czech University of Defence. Airforce cadets are training on them on a daily basis. Thanks to the DFB simulators, the University was awarded in several events.

IDET Award

In 2023, DFB was honored with the Golden IDET Award for the most innovative product at IDET, the largest defense event in the Czech Republic.

CYMSTAR LCC.

Leader System Integrator In USA is using Dogfight Boss simulators at every event and fair around the globe.

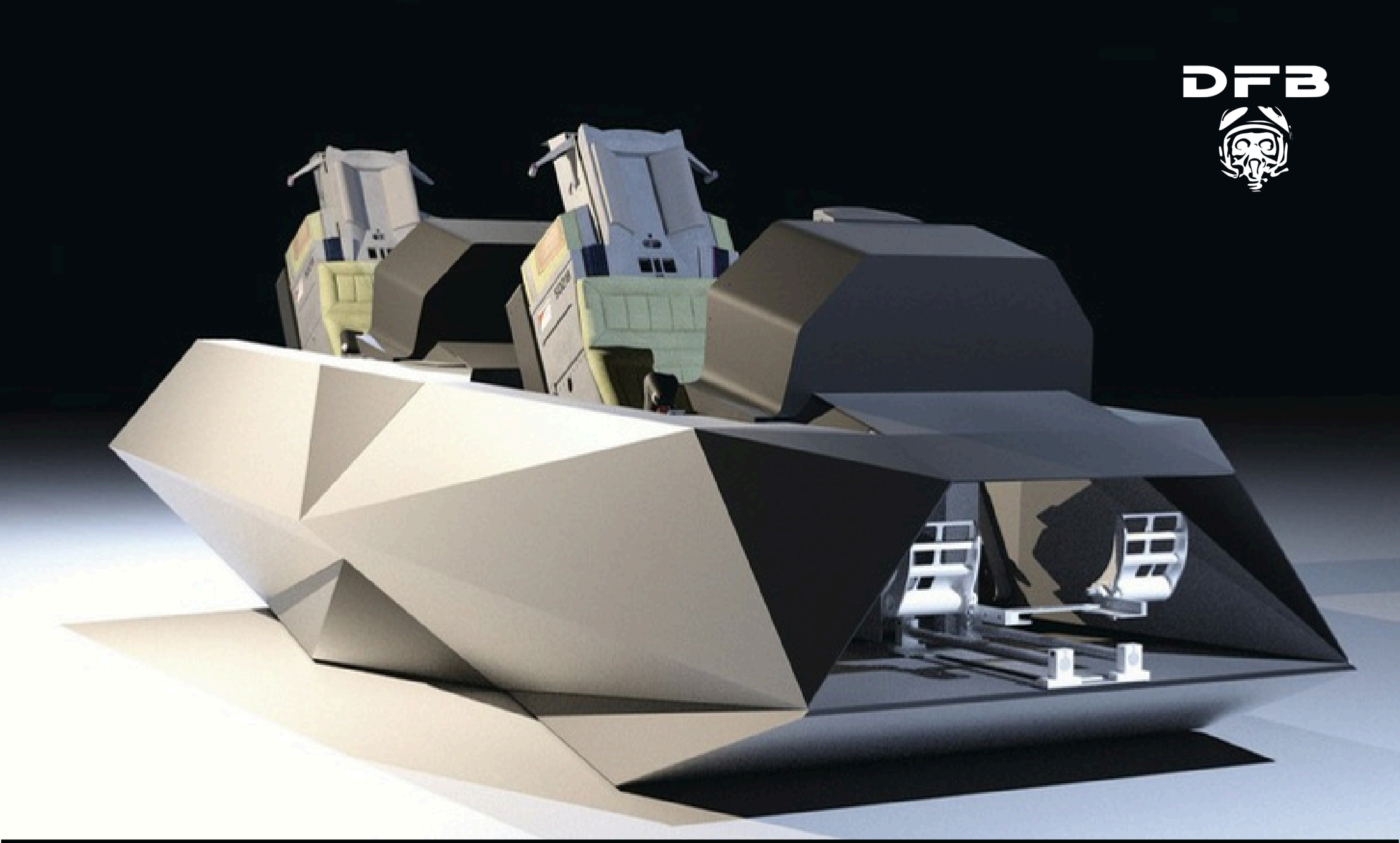


AECHELON TECHNOLOGY, INC.

is a leading provider of visual simulation image generators, is using DFB F-16 simulator for demos and events.

FUTURE PROJECTS

Ongoing DFB developments include AH-64 Apache, CH-47 Chinook, F-35 Lightning and UH-60 Blackhawk simulators



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