





Booz | Allen | Hamilton























# The Best Virtual Maintenance Training Development Platform

# VE Studio<sup>®</sup> is the world's most proven development platform for creating 3D virtual training solutions.

Create complex and immersive commercial and military training applications with the ability to deploy to a multitude of devices.

VE Studio®'s features enabling you to rapidly prototype and scale your training across an enterprise quickly and cost-effectively.





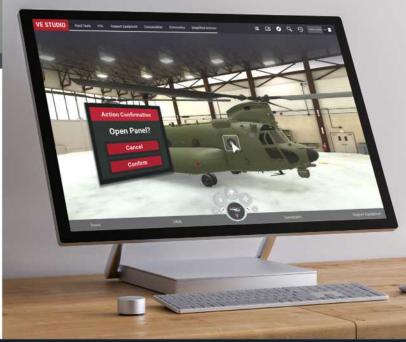


# From Prototyping to Full-Scale Solutions

Build a virtual training prototype in a few hours then scale it to a full production system with thousands of procedures. The architecture of VE Studio<sup>®</sup> allows rapid prototyping and iteration. VE Studio<sup>®</sup> is robust enough to handle the simplest part task trainers and the most complex equipment such as aircraft and weapons systems.

# VE Studio® Development features

- » Database-driven production pipeline
- » Use industry standard 3D models
- » Revision control support
- » Virtual environment framework
- » Automated requirements analysis
- » Requirements traceability
- » Automated regression testing
- » Integrated Unity production process

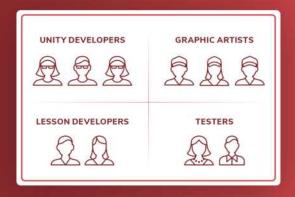


# Comparing two development teams working on the same project

#### Team A

#### With VE Studio

The development team can be small and lean, achieving just as much as any other team.



#### Team B

#### Without VE Studio

This development team requires more people to achieve the same tasks, costing more in the long run.

UNITY DEVELOPERS

GRAPHIC ARTISTS

GRAPHIC ARTISTS

GRAPHIC ARTISTS

GRAPHIC ARTISTS

TESTERS

GRAPHIC ARTISTS

GRAPHIC ARTISTS

GRAPHIC ARTISTS

GRAPHIC ARTISTS

GRAPHIC ARTISTS

### Additional Functionality and Modules

- » Optimized CAD conversion recipes
- » Simulation engine framework
- » Procedure monitoring/ lesson engine
- » Instructor Operator Station application
- » Student station training application
- » Intelligent tutoring





# The Future of Training

VE Studio® pioneered and leads the training industry in virtual maintenance training programs because of its proven database architecture, development processes, and productivity tools, available to customers right out of the box.

**VE Studio**® combines development workflow best practices with innovative tools and components that make building complex virtual training applications, easier, faster, and less expensive.



### Manage Content

#### Fidelity Matrix & Editor

- » A relational database to connect models to behaviors, procedures to lesson, and any other data shared among the system.
- » Easy-to-use database editor simplifies content management and edition with a full API. Third-party applications can also write and read directly to the database.

# Design the Training

#### Requirements Analyzer

- » Read, analyze, and import written procedures directly into the Fidelity Matrix, saving hours to months of manual recreation.
- » Machine Learning build a database of known wordobject pairs on the fly and let the Requirements Analyzer automatically mark up new procedures.
- » Source data modifications propagate through the entire system with confidence that each responsible entity receives and reacts to the modified data.

#### **Content Wizards**

- » Create and maintain traceable history from the content presented to the student back to the source data.
- » Simplify project creation and adding content to the system in the early stages of development through content wizards. Get up and running with a prototype in thirty minutes.

#### **Physical Constraints**

» Describe physical interactions between 3D objects to define dependencies and group interactions without having to write code.

#### **Model Import Wizards**

» Use built-in model import wizards or directly import .FBX models into Unity.

#### **Content Processing**

» Automatically connect 3D models with their database associated behavior. Any changes in the source art files or database will be automatically detected and propagated through the system to ensure the graphical representation remains up-to-date.

## Author & Manage Lessons

#### Instructor-Operator Stations (IOS)

» A comprehensive Instructor-Operator Station (IOS) application controls the lesson creation and assignment, realtime monitoring, student interaction, and after-action debriefing of the students in the classroom.

#### Instructor Dashboard

» Assign lessons, manage class data, monitor student progress, mirror student screens, or even take over via remote control. Create after-action reviews of recorded assessments to help students improve.

#### Student Station

» Watch auto-plays, practice, or receive individual or group assignments from instructors. Track lesson progress with immediate feedback to inform students of mistakes.

#### **Lesson Authoring**

» SMEs and instructors use drag-anddrop editing to create lesson scenarios or modify the lessons auto-generated from procedures marked-up in the Requirements Analyzer.

#### Live Lesson Recording

» SMEs and instructors can create auto-plays, tutorial, practice, and assignment lessons simultaneously by performing and recording actions directly in the virtual environment.



Step #	Description
-1	Perform 'Acknowledge Message'
1.1	Acknowledge Message
2	Perform 'Acknowledge Message'
2.1	-Acknowledge Message
3	Move the rear roll-off track axially to the location for fit
4	Adjust the front and rear roll-out skates to take the weigh
5	Install the roll-off bridge tracks with support stools.
6	Install the roll-off trolley on the left side of the enclosu

# Construct Simulations

#### Simulation Engine

» Create custom-defined simulations that bring the virtual training environment to life. The Simulation Engine can drive object states, animations, and audio to create dynamic schematics and faults that immerse the user in the virtual experience.

#### **After-Action Review**

» Instructors can review a student's assessment by viewing their statistics and recording their performance at each step in the procedure.

#### **Intelligent Tutor**

» Leverage AI to observe and dynamically alter training branches based on a student's performance using thirdparty Intelligent Tutor plug-ins to modify the pace, lessons, and degree of task difficulty based on the student's interaction with the course ware.

#### SCORM and xAPI Compliance

» Record student progress into a corporate LMS. Easily modified API sets offer compliance integration for recording student process into an enterprise LMS.

## Publish the APP and Deploy

#### Message Manager

» Communicate with all VE Studio runtime applications to keep individual and classroom systems in sync. Third-party tools can also hook into the networking system via a robust API.

#### Manage Variants

» Manage the development and deploying variants within the same project and database, reusing as much as possible within a project.

#### One-Button VR Deployment

» Create desktop and Virtual Reality solutions simultaneously, reusing the same lesson and 3D content. Switch from one to the other during development through a simple dropdown.

#### Localization

» Deliver training solutions worldwide in native languages from a singular deployment.

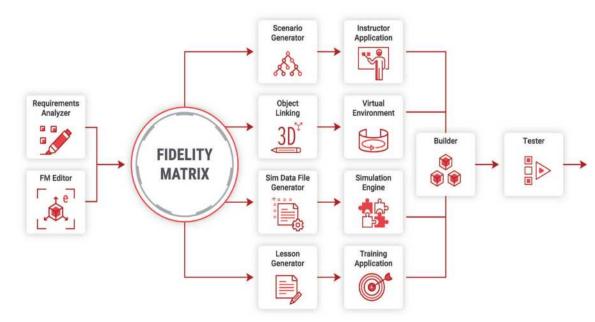
# Replace DIP

Diagram View		
# 4	Description	
6.14	Look at ELECTRICAL SYSTEM voltmeter gauge:	
6.14.1	Needle should show 23 to 29 volts (in the green band).	
6.15	Check that CABLE DISCONNECTED light is not lit.	
6.16	Check that CIRCUIT BREAKER OPEN light is not lit.	
6.17	Check fuel level:	
6.17.1	Added action: 'Panel Lights Test Pushbutton' set to'1'	
6.17.1	Added action: 'Panel Lights Test Pushbutton' set to False'	
6.17.1	Push in and set TANK SELECTOR switch to RIGHT FRONT.	
6.17.2	Read amount of fuel in right front tank on gauge.	
6.17.3	Push in and set TANK SELECTOR switch to LEFT FRONT.	
6.17.4	Read amount of fuel in left front tank on gauge.	
6.17.5	Push in and set TANK SELECTOR switch to REAR.	
6.17.6	Read amount of fuel in rear tank on gauge,	
6.18	Check hydraulic pressure gauge for bleed-off.	

## Fidelity Matrix<sup>TM</sup>

The foundation of **VE Studio®** is a relational database core called the Fidelity Matrix<sup>™</sup> (FM). This userfriendly database contains all requirements, 3D objects, 2D support equipment, environmental properties, behaviors, and constraints.

The automated environment build and regression testing tools draw from the Fidelity Matrix<sup>™</sup> to construct and check the final environment.



# Disti<sup>®</sup>

# Have questions?

Please reach out through the information below



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