

## VIRTUAL TASK TRAINER (VTT)

EXPEDITE EQUIPMENT INSTALLATION, MAINTENANCE, AND REPAIR TRAINING

Based on NGRAIN commercial-off-the-shelf software, the NGRAIN Virtual Task Trainer (VTT) is a customized application that leverages 3KOs™ (3D Knowledge Objects)—or 3D equipment simulations—to deliver virtual hands-on training at home, in the classroom, or in the field.

### KEY BENEFITS

#### EXPAND ACCESS TO TRAINING

VTTs enable students to practice part removal and replacement procedures in real time, overcoming training equipment shortages and scheduling issues. Optimized for Web deployment, VTTs are accessible to instructors and students not only in the classroom, but also after hours, from home, or in the field.

#### ACCELERATE TECHNICAL TRAINING

VTTs support learning by doing and are proven to achieve learning objectives faster than other methods, by as much as 60 percent. Students are able to learn at their own pace and practice equipment procedures in real time as often as needed, receiving immediate feedback and guidance on mistakes and successes.

#### REDUCE TRAINING COSTS

VTTs supplement or replace hard trainers and training equipment, significantly lowering training costs. NGRAIN customers have repeatedly experienced immediate multimillion dollar savings in actual costs, and tens to hundreds of thousands of dollars in savings by avoiding the ongoing cost of hard trainers or training equipment maintenance.

Figure 01 (Above) | [NGRAIN Virtual Task Trainer](#)  
Practice equipment procedures with virtual hands-on exploration.

### WHY NGRAIN?

NGRAIN makes 3D attainable, while delivering unparalleled real-time virtual hands-on interaction with 3D equipment simulations. With NGRAIN, SMEs can easily update, integrate, and distribute 3D simulations, sending them over the Web to everyday desktop, laptop, and tablet computers. NGRAIN solutions are proven to accelerate training and improve first-time-right performance, transforming novices into experts.

For more information on how the military is using NGRAIN to improve training and optimize operations, contact NGRAIN at [info@ngrain.com](mailto:info@ngrain.com) or download a copy of the Report on Military Use of NGRAIN in Training and Operations at [www.ngrain.com/3Dreport](http://www.ngrain.com/3Dreport).

### PRODUCT FEATURES

#### PARTS FAMILIARIZATION

##### DELIVER VIRTUAL HANDS-ON

Personnel familiarize themselves with equipment by freely exploring a 3D equipment simulation. Interactions include rotating, moving, and crosssectioning the equipment and its parts in real time, as well as seeing internal parts in the context of a transparent assembly, and viewing part information and callouts.

#### CHECK ON LEARNING

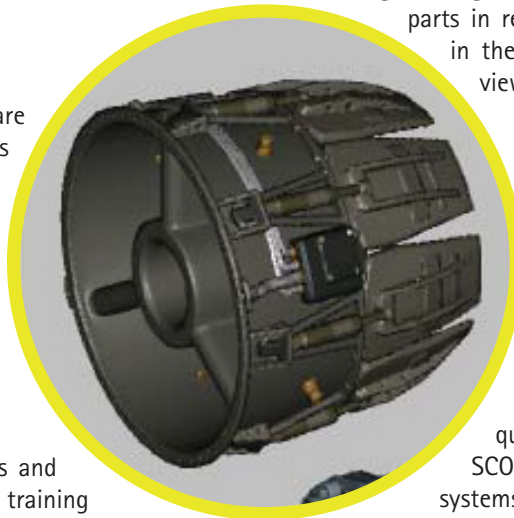
##### VALIDATE KNOWLEDGE ACQUISITION

Personnel test their knowledge by performing procedures on a 3D equipment simulation. Tests can include part removal and replacement, as well as multiple choice and short answer questions. Test results can be tracked by SCORM conformant learning management systems.

#### LEARN BY DOING

##### ENABLE REAL-TIME GUIDED PRACTICE

Personnel practice procedures by performing them on the 3D equipment simulation, receiving instant feedback (and guidance where needed) on mistakes and successes. Personnel are able to remove and replace parts in real time.



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## PRODUCT FEATURES

### KNOWLEDGE ACQUISITION

#### PROVIDE PROCEDURAL ANIMATIONS

Personnel learn procedures by watching 3D animations that conform to customer technical manuals and specifications. Animations can highlight tools to use at any given step, and include callouts and audio, such as voice-over instructions.

### SELF-SUSTAINMENT AND REUSE

#### USE SMEs TO UPDATE 3D SIMULATIONS

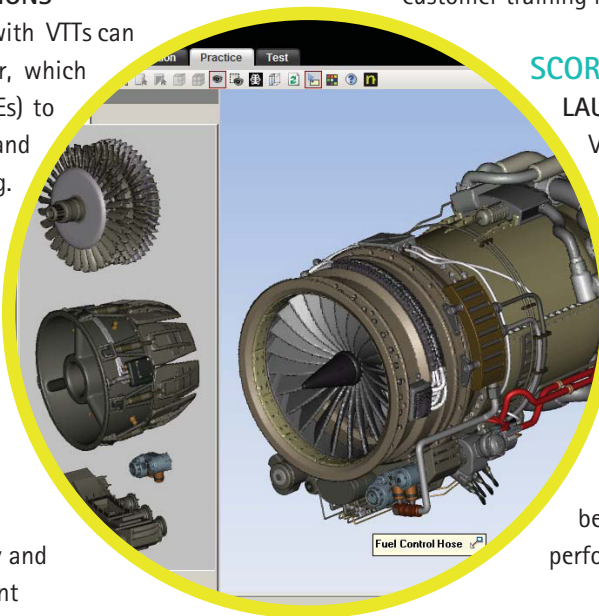
3D equipment simulations delivered with VTTs can be updated with NGRAIN® Producer, which enables Subject Matter Experts (SMEs) to create and update 3D animations and tasks after only two days of training. As procedures change, SMEs can update VTT content, as well as repurpose it for other applications, such as Microsoft® PowerPoint® presentations, Microsoft® Word documents, and Adobe® PDF files.

### INSTRUCTIONAL AID

#### IMPROVE COMMUNICATION

Instructors are able to support theory and procedural lectures with 3D equipment simulations, identifying both external and internal parts visually, playing procedural animations, and performing task steps in real time.

Figure 02 (Above) | NGRAIN Virtual Task Trainer  
Practice equipment procedures with virtual hands-on exploration.



### LEARNING DESIGN

#### BASED ON INSTRUCTIONAL DESIGN

VTTs adhere to industry standard principles of instructional design, such as Interactive Multimedia Instruction (IMI) guidelines, ensuring quick comprehension and lasting retention of information delivered. NGRAIN instructional designers follow the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) model to ensure VTTs effectively meet customer training requirements.

### SCORM CONFORMANCE

#### LAUNCH AND TRACK WITH LMSs

VTTs can optionally conform with SCORM 2004. Treated as reusable Sharable Content Objects (SCOs), VTTs can be launched and tracked by industry standard learning management systems, such as Saba, OutStart, Blackboard, Desire2Learn, and Eduplus. Typical tracked information about student performance includes tasks started and stopped; time between tasks; incorrect and correct performance of task steps; and test results.

### WEB OPTIMIZATION

#### DEPLOY FROM WEB SERVERS

VTTs are designed for deployment over the Web, and can be accessed by personnel on desktop, laptop, and tablets PCs. VTTs can be stored and accessed from servers, CD-ROMs, or student PCs.

## MINIMUM SYSTEM REQUIREMENTS

Computers must have the following or higher:

- Microsoft® Windows® 2000 SP4, Windows® XP Professional SP1a, Windows® XP Tablet PC Edition SP1, or Windows® Vista™
- Microsoft® Internet Explorer 6.0 SP1
- Microsoft® DirectX® 8.1
- Microsoft® .NET Framework 2.0
- 800 x 600 screen area (1024x768 is recommended)
- 16- or 32-bit color depth

Performance is related to computer processor speed and memory and to the complexity of the 3D model. 128 MB of RAM and a 700 MHz processor is the minimum; however, 512 MB of RAM and a 1.4 GHz processor is recommended. Performance will be improved most by adding additional RAM.