FATS® 100MIL VIRTUAL TRAINING SYSTEM

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The FATS® 100MIL is a major expansion in weapons training capability.

A s the global leader of integrated live-fire and virtual weapons training systems, Meggitt Training Systems introduces the FATS® 100MIL simulation training system. The FATS 100MIL is a major expansion in weapons training capability, introducing revolutionary features such as advanced game engine 3D Marksmanship, enhanced diagnostics with intelligent Automatic Coaching and VBS3-based Collective training.

The system provides an impressive array of functionality for both instructor and trainee, delivering solid weapon handling and shot placement analytics, coaching tools that automatically highlight trainee results for reinforcement or correction, and enhanced graphic capabilities for an all-encompassing immersive training platform.

The 3D Marksmanship Training environment represents an innovative training advancement, providing visually realistic and highly detailed terrains and targets, including weather, and striking visual effects to include wind-blown environments, and realistic ballistic effects. The visual fidelity and target detail is stunning and readily supports target detection, recognition and identification (DRI) requirements.

The after action review allows engagement and shot assessment in a 3D virtual environment with correct target perspectives, while providing detailed trainee diagnostics for skill reinforcement and/or correction. The training environment can be altered by manipulating the temperature, elevation, wind speed and direction, affecting the visual movement of the trees and grass and most importantly, influencing the bullet ballistics during flight.

To help engage and mark moving targets correctly when not using through-sight devices, a lead point indicator is added. Additionally, a "target indicator" and "target distance marker" is available to facilitate virtual training and skill transfer to a live fire environment. The system also provides advanced courses of fire and marksmanship feedback previously unavailable with the required fidelity in virtual marksmanship training.

Never before available in the small-arms training market, Meggitt's patent-pending Automatic Coaching leverages the enhanced 3D Marksmanship, Meggitt's BlueFire® weapon simulator diagnostics and optional wireless tablet technology to successfully provide training feedback at the firing lines. Instructors can now stand next to the trainees and show exact shot

Meggitt's patent-pending Automatic Coaching leverages the enhanced 3D Marksmanship

placement, improper weapon handling, weapon trace and demonstrate correct behavior in real time. Automatic Coaching creates a flexible training environment by putting instructional tools in the hands of the instructor for ready presentation to the trainee.

Automatic Coaching tracks the weapon sensor information — how the trainee manipulates the trigger, how much pressure is applied to the buttstock, how the weapon is canted – with shot analysis that points back to customer doctrine and reinforces the fundamentals of shooting to

the trainee. Based on detailed shot analysis, automatic assessment flags questionable results, allowing the instructor to quickly identify and correct fundamental marksmanship errors with coaching techniques pulled from the organization's official training doctrine, immediately available on an individual tablet for trainee reference. Additionally, the tool include customized video excerpts and doctrinal references to correct basic errors in shooting technique.

The collective training solution employs Virtual Battlespace 3 (VBS3) for squad level training, a flexible simulation training solution utilizing scenario training, mission rehearsal and more. The enhanced visual realism of collective training prepares trainees on effective decision-making

within a safe, non-lethal, immersive environment. VBS is widely used for Virtual and Constructive training, and can now be maximized with the Meggitt small arms training solution.

Meggitt's FATS 100MIL is available in both permanently stationed and portable configurations. The system can be delivered in a completely self-contained mil spec storage case for portability and protection from harsh environments, or delivered in a rack-style configuration for a dedicated training classroom. The training modes include 3D Marksmanship, Collective training and judgmental HD video scenarios, all supporting Meggitt's own extensive simulated weapon selection. The FATS 100MIL comes pre-loaded with a broad set of courseware to support training
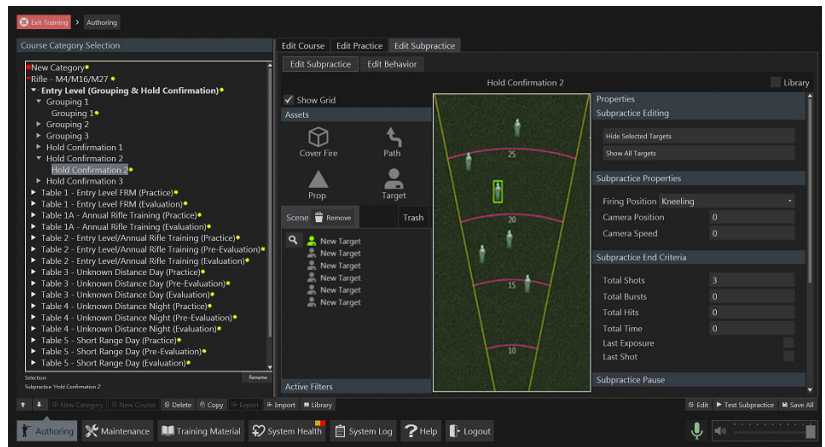

Intuitive authorship flexibility allows greater customization

with embedded marksmanship and collective courseware creation tools.

With the new features and expansions, Meggitt's FATS 100MIL offers unmatched training advancements and includes the latest technological developments to meet the needs of combat forces worldwide.

General Features:

- Up to 60 weapons can be assigned for up to 15 trainees for concurrent exercises
- Multiple weapon simulators can be assigned to each trainee
- Allows assignment of Meggitt's patented wireless BlueFire weapons to each trainee
- Direct, granade lauched and shoulder lauched weapons available in Marksmanship. All supported in Collective modes, including mortars.
- Unified User Interface (UUI)
  - Common look and feel across training modes
  - Dark color theme conducive to

low-light conditions
  - Common workflow across training modes
  - Weapon test functionality available within training modes
  - System Health integrated into UUI
  - Error and warning indicator visible to operator within any training mode
- Import customer-specific training manuals (PDF, MS Word/PowerPoint,. mpg,.wmv)
- System utilization reports for data mining, including time spent in training mode, weapon type, etc.
- Tablet training material content
  - Only System Setup instructions (if required) stay in the tablet
  - Other materials streamed from system for data security
  - Materials can be viewed on the tablet and main screen(s) simultaneously
  - Accessible from within each training application
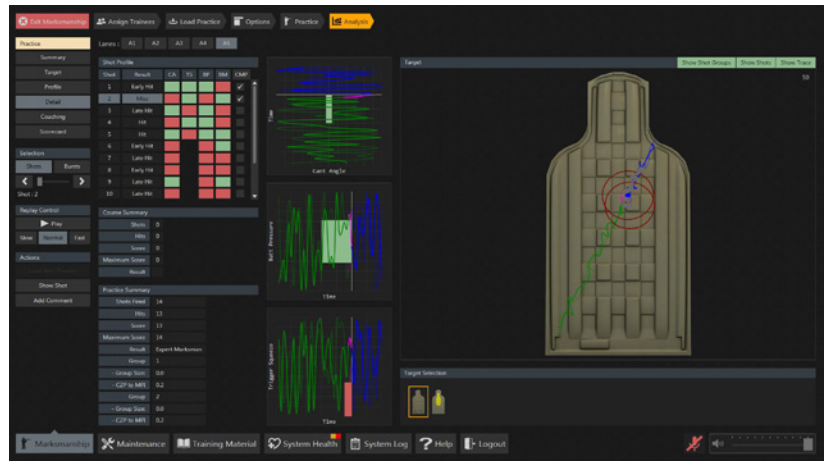 - System can be run from the optional tablet once training commences
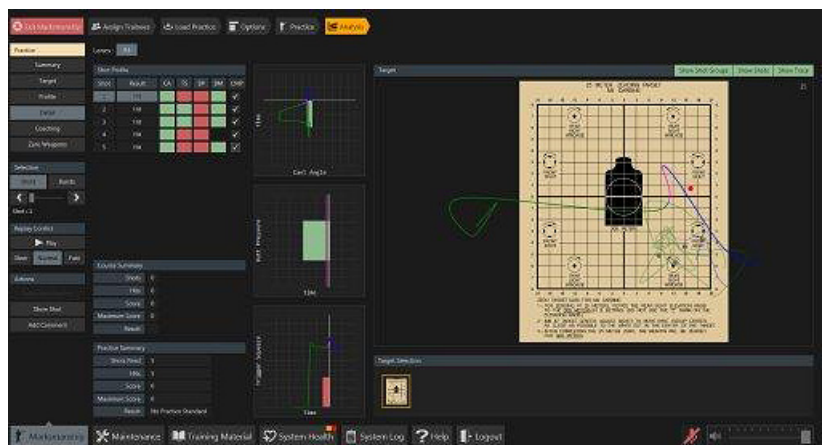
Automatic coaching shows instant feedback from trainee

3D Marksmanship Training Features:

- Photorealistic 3D terrain
- 3D targets (including "paper" targets)
- Natural occultation in 3D
- High-fidelity environmental effects
- Support of multiple weapons per trainee
- Moving eye point (shoot and move)
- Perspective correct target rendering for each lane
- Tablet modes include:
  - Operator Mode - controls all lanes
  - Instructor Mode - controls contiguous range of lanes (i.e. 1-5)
  - Trainee - functions as a Firing Point Computer
- Link doctrinal documents and scorecard(s) to a course of fire
- Automatic Coaching analyzes shooting results/sensors to highlight potentially poor shooting habits

Collective Training Features:

- VBS3-based training mode
  - Panoramic view training with up to three screens
  - Using existing weapons
  - Standard courseware included
  - Provides enhanced, detailed terrain
  - Thorough, current 3D models (~ 9,000 models)
  - Artificial intelligence and automatic pathfinding
  - Game-like look and feel of the UI
- Author/Select new scenarios
- Monitor scenario execution and After Action Review (AAR)
  - 2D map view
  - 3D view – matches the horizontal Field of Vision (FoV) for the image across the screens
- Runtime summary view
  - Shots/hits/misses
  - Sensors
  - Malfunction initiation
  - Enter comments
- Meggitt Training Systems' unique VBS3 features include:
  - Continuous compass tape across multiple screens

Intuitive UUI for easy navigation and workflow
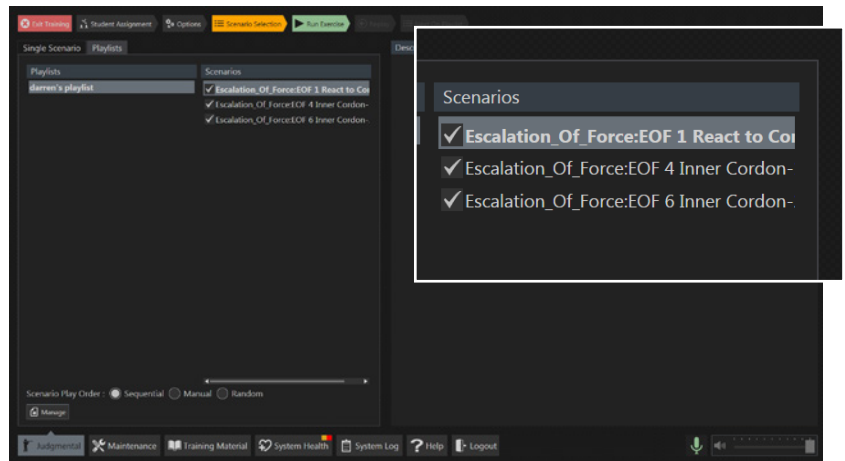
Ability to add scenario playlists and video

- Infantry awareness indicator and/or GPS on main screen
- Hail
- Report mobility, firepower and catastrophic kills to UUI
- AI behavior when firing weapon simulators
- Improved AAR views - scene during AAR matches the run-time scenario display
- Supports three-screen replay

Judgmental Training Features:

- Support for 1920 x 1080p HD scenarios
- Near miss (inclusive of branching)
- Branch tree displayed on UI - default branches identified
- Branching feedback – which branches were executed and why
- Judgmental UI integrated into UUI

- Pause on shot (as opposed to hit)
  - Configurable for pause time
- Instructor can enter comments about the trainee's performance during training
- Ability to add a scenario playlist

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