Department of Tactics, Training and Doctrine

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Desired Attributes

Training and education must be interactive, engaging, and challenging to all types of learners; and at the collective level emphasizing combat focused exercises and collaborative problem-solving events.

Advancements in technology should enable:

- **Delivery of training** (reduce resource requirements)
  - Examples: Immersive VR; computer-guided
- **Ability to conduct unlimited sets and repetitions** (across all three training domains)
  - Examples: Accessible to all Soldiers at all times; usable in the classroom, unit area, or "in the barracks"
- **Performance evaluation** (against a training standard)
  - Examples: Immediate feedback on Soldier performance during the event using published standards from tasks, lesson plans, etc.
- **Assessment** (how to improve immediate feedback)
  - Examples: What went well? What went wrong? How to fix it? AI-integration to bridge the feedback spectrum
- **Recording & storing training results** (build learner profile; historical data analysis)
  - Examples: Training performance data to inform future training needs; build a competitive environment
- **Collect useful human performance metrics** (use metrics to generate follow-on training)
  - Examples: The previous iteration's performance informs the difficulty, complexity, and scope of the next iteration (i.e. adaptive learning)

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Training Technology

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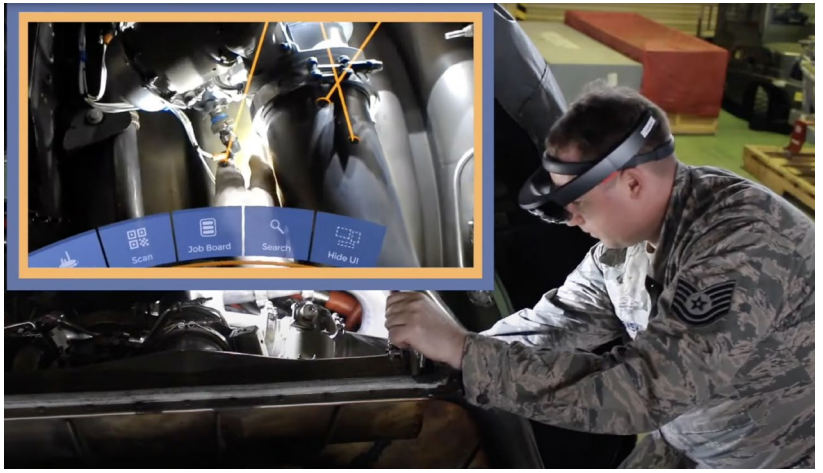
Haptics

Virtual Reality

Embedded Training

Augmented Reality



Training Technology Applications

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Individual and Collective Training

Mission Planning and Rehearsal

Training Technology Applications

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Combat Identification (CID)

- Immersive VR allows digital “walk around” of vehicles or hover above from UAS perspective
- Interactive vehicle features to study weapons and capabilities
- Soldiers and Leaders conduct unlimited CID reps & sets
- Beneficial across all three training domains

Digital Ranger School Observation Report (OR)

- Digital OR provides near real-time class statistics and reporting
- CDRs have rapid access to student records for recycle boards
- Eliminates hand-carry student records by LNOs
- Updates information and eliminates data transfer errors to “green screen”

Engagement Area Development Using VR/AR

- Unlimited reps on EA Dev process in a VR environment
- Live terrain walk and EA Dev using AR technology
- Terrain used in OPORDs / Planning exercises used in virtual environment to enhance planning and provide virtual “recon” capability

MCoE Embedded / Hybrid Training Vision

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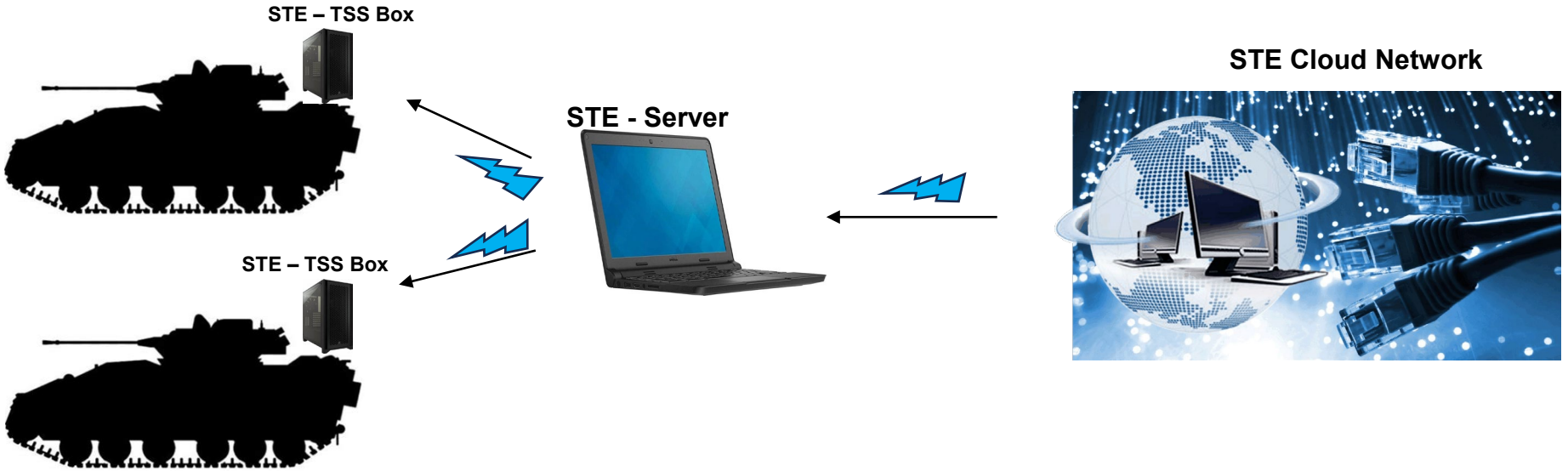
- Future combat platforms are capable of executing virtual training from the individual to the collective level using the platform Soldier Machine Interface (SMI)
- Platforms are designed to train individual and crews using embedded software and train collectively through a STE-enabled appended device connected via a standardized multi-functional vehicle port (MFVP)
- Embedded / Appended (i.e. hybrid) training provides units the ability to conduct individual through collective virtual training and mission rehearsals at the echelon (up to CO level), place (ex: unit area, forward deployed location), and time of their choosing
- Platform embedded / appended collective training capabilities reduce the footprint of and reliance on installation simulation facilities and their accompanying resource requirements

Virtual Training using Synthetic Training Environment – Training Simulations Software



Looking to the future

- **Learner Centric**
- **Adaptive, Scalable & Tailorable** (complexity of OE)
- **Reduce reliability on Simulated Military Equipment**
- **Non-proprietary** (hardware and software)
- **Plug and play capabilities** (compatibility)
- **Systems must be intuitive and easily learned and developed**
- **Embedded Training w/ link to LVC&G/STE architecture**
- **Artificial Intelligence**
- **Virtual / Augmented / Extended Reality**
- **Human Performance and Biometric Systems**
- **Record performance**
- **Profiles to encourage competition**

Questions

STE Overview

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***HQDA likely accelerating NGC to FY26**