



VirtualPaint™

VIRTUAL REALITY PAINT TRAINING SYSTEM



STAR4D Painter Training

Building on Experience and Success

STAR4D (Spray Technique Analysis and Research for Defense)

- Recognized subject matter experts in painter training
- Provided outreach to 65 DoD operated facilities in 42 states
- Conduct extensive research and develop testing procedures to improve application efficiency and reduce associated costs to the DoD.
- Develop tools for enhancing painter skill.

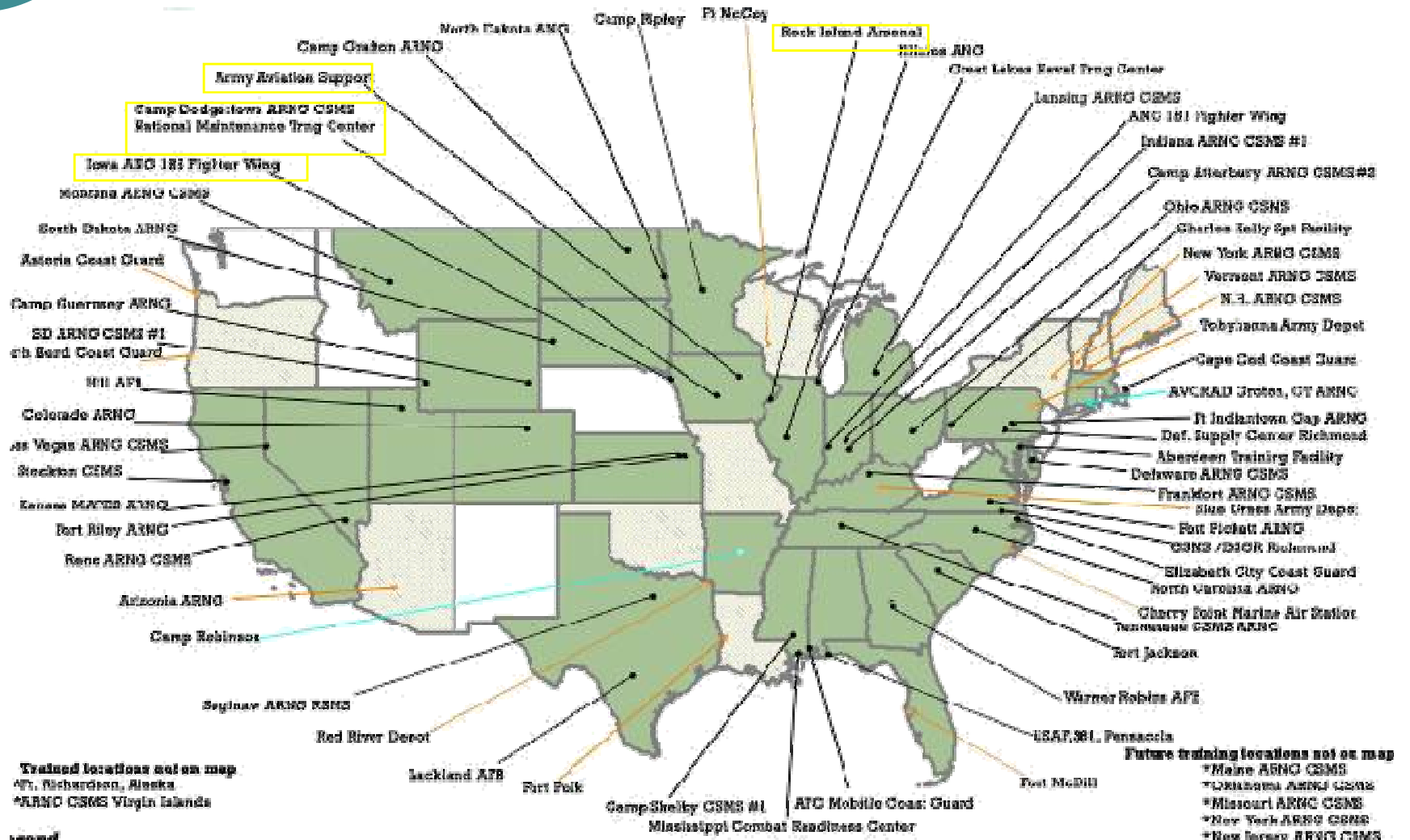
Benefits of STAR4D Training

- Finish Quality Improvements
- Higher Transfer Efficiency
- Process Waste Reduced





DoD Facilities that STAR4D has Assisted



History of Simulation Training



Simulation has been used for years as a training method for many industries

- Flight Simulation
- Combat Training
- Health Care (Surgeons)
- Industrial Trades

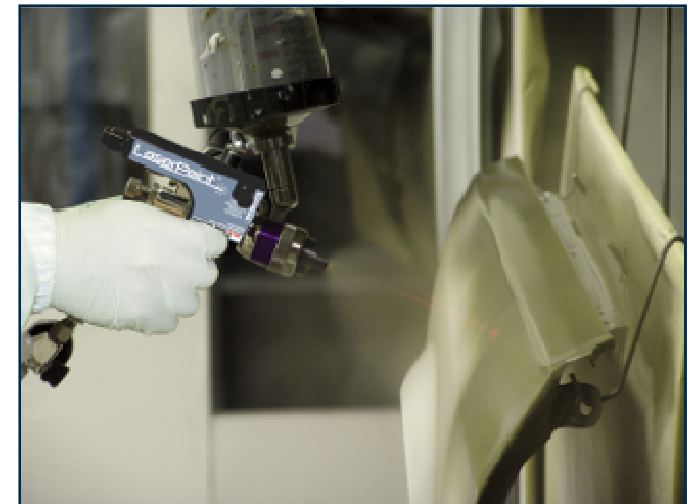




Product Development

LaserPaint™

- Targeting tool that attaches to any model spray gun
- The LaserPaint projects two laser dots which converge at the correct gun-to-target distance



SUBSTRATE



Product Development

VirtualPaint Training System Provides a Better Option

- Developed by the IWRC using non-federal funds
- Uses state-of-the-art virtual reality technologies, precise software modeling and a fully instrumented spray gun to accurately replicate actual paint application.



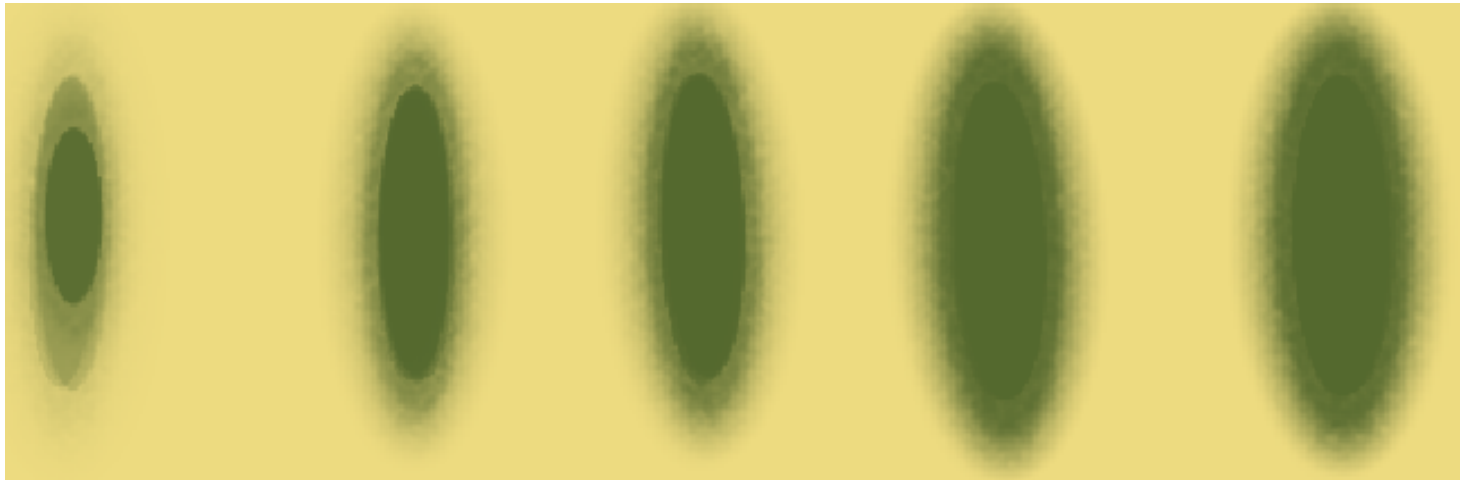


VirtualPaint Features

Highly accurate representation of spray patterns / coating accumulation

Support for wide range of spray gun settings

- Coating flow rate
- Air pressure
- Fan pattern size
- Trigger pull





VirtualPaint Features

Realistic application technique simulation

- Stand-off distance
- Spray gun orientation
- Traversal speed
- Spray gun triggering
- Spray pass overlap

Visual and statistical feedback

- Overspray
- Mil build average
- Coating accumulation mode
- Transfer efficiency
- Paint consumption
- Elapsed time

Student Name:	Virtual Instructor
Time:	1:03
Transfer Efficiency:	64.4%
Build Efficiency:	154.3%
Avg. Thickness:	1.351 mils
Finish Used:	10.2 oz





Benefits of VirtualPaint

Instructor Use

Hands-on Classroom Instruction & Demonstration

- Demonstrate Proper Equipment Set-up
- Demonstrate Spray Technique
- Coating Mil Thickness
- Transfer Efficiency

Student Use

More Opportunity for hands-on practice

- Experiment
- No cost to making mistakes
- Easy fun learning environment

Cost

- No cost for coating
- No cost for practice parts

Time

- Zero Surface Prep.
- Zero Clean-up
- Zero Coating Preparation

Environmental & Safety Regulations

- PPE Not required
- No hazardous material usage
- No permit or material usage limitations



VirtualPaint vs. Traditional Painter Training

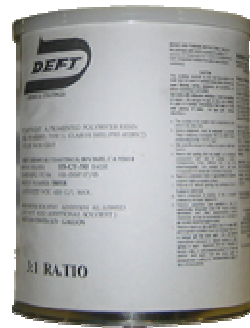
Few Organizations Offer Effective Hands-on Painter Training.

•Traditional drawbacks associated with Painter Training.

*Cost *Safety *Labor *Time *Equipment



Paint Booth
Paint Filters
Spray Gun
Paint



Air Hose
Respirator
Paint Suit
Gloves



Parts to Paint
Backdrop Paper
Clean-up Solvent
Instructor Time



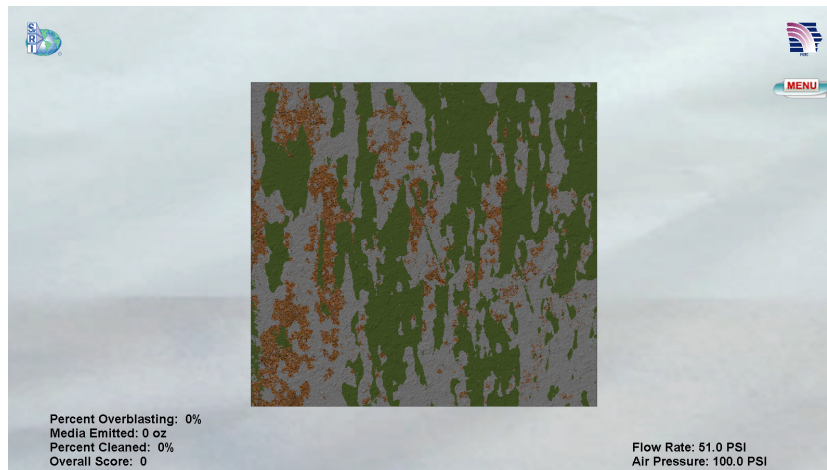
Preparation Time
Clean-up Time
Waste Disposal
Student Time



Future Developments

Abrasive Blasting Simulation

- Properly train abrasive blast technicians in the same manner as VirtualPaint
- Currently beta testing, public release within 3 months





Future Developments

Airless Spray

- Currently under development
- Integrating multiple coating viscosities and fluid tip choices
- Data collection is underway, beta testing to begin within the next 3 months
- Ability to instrument any airless spray gun





Questions

Thank You

Any Questions?

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