



Empowering Subject Matter Experts to Rapidly Produce Interactive 3D Simulations for Maintenance Training

Great Ideas Competition
DOD Maintenance Symposium

October 24, 2005

How can you...



Ensure *first-time-right* installation of new equipment?



Provide *enough* hands-on practice time?



Respond *rapidly* to new training requirements from the field?

Great Idea!

Empower **Subject Matter Experts**

to

**Rapidly Produce Interactive 3D
Simulations**

Current Approaches to Maintenance Training

Text

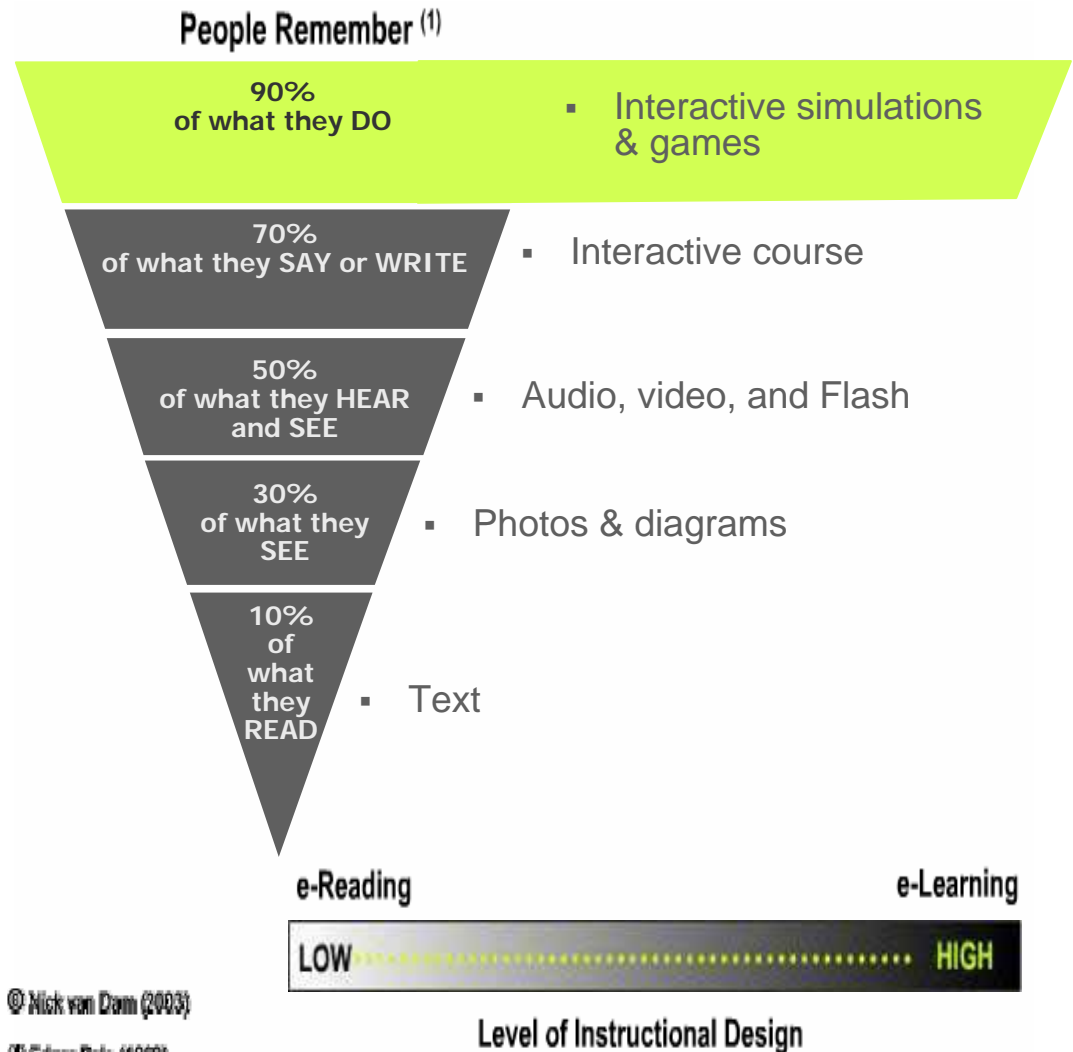
Photos,
Video, & 2D
Animations

✓ **Low cost**

✓ **Can be easy to create and update**

✓ **Anytime, anywhere access**

✗ **Low learning effectiveness**



© Nick van Dam (2003)

(1) Edgar Dale (1969)

Current Approaches to Maintenance Training



Hard Trainers
Trainers

Live
Equipment

×High cost

×Difficult to create and
update

×Limited access

✓High learning effectiveness

Current Approaches to Maintenance Training: **The Gap**



✓ **Low cost**

✓ ***Can be easy to create and update***

✓ **Anytime, anywhere access**

✗ **Low learning effectiveness**

✗ **High cost**

✗ **Difficult to create and update**

✗ **Limited access**

✓ **High learning effectiveness**

Closing the Gap: Empower SMEs to Rapidly Create & Update Interactive 3D Simulations

Text

Photos,
Video, &
Flash



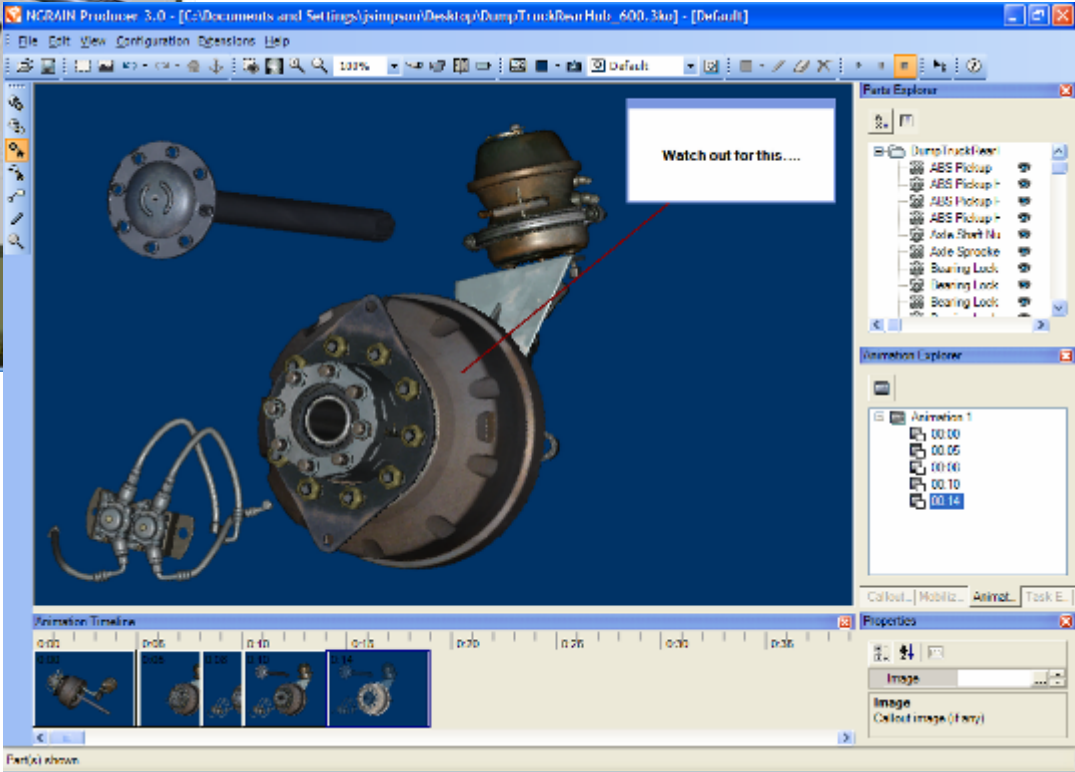
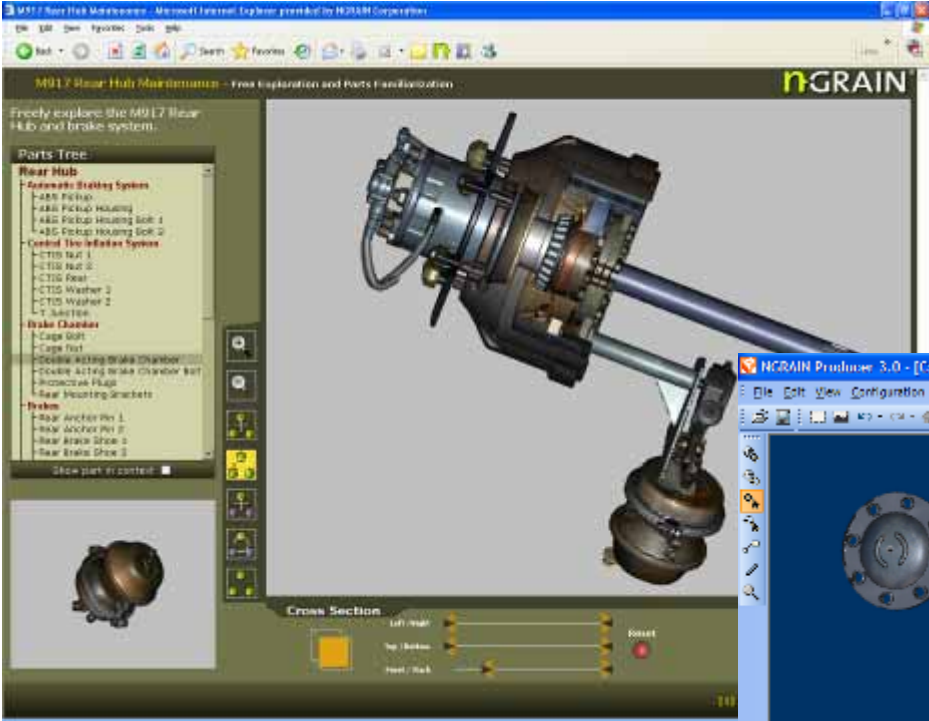
NGRAIN Interactive 3D Simulations

Hard Trainers
Trainers

Live
Equipment

- ✓ **Low cost**
- ✓ **Easy to create and update**
- ✓ **Anytime, anywhere access**
- ✓ **High learning effectiveness**

Demonstrations



Benefits of Empowering Subject Matter Experts

economical

remove
expense of
programmers

attain self-
sufficiency

effective

achieve
benefits of
interactive
3D

train soldiers
to standard in
less time

expedient

shorten
development
cycles

respond faster to
critical training
needs



Optimize operational readiness at a
at a lower cost

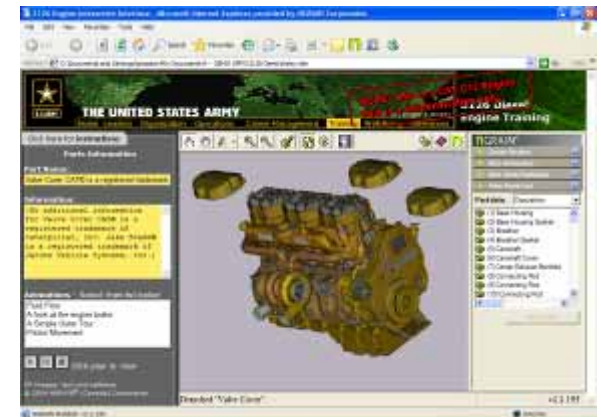
NGRAIN Interactive 3D Simulations Transforming Training



**Stryker BDAR VMTT
MANSCEN 62B Course
M917A1 Dump Truck
Caterpillar 3126 diesel engine
PM MEP 3KW Generator
PM DCATS VS SATCOM
National Guard M9 Pistol**



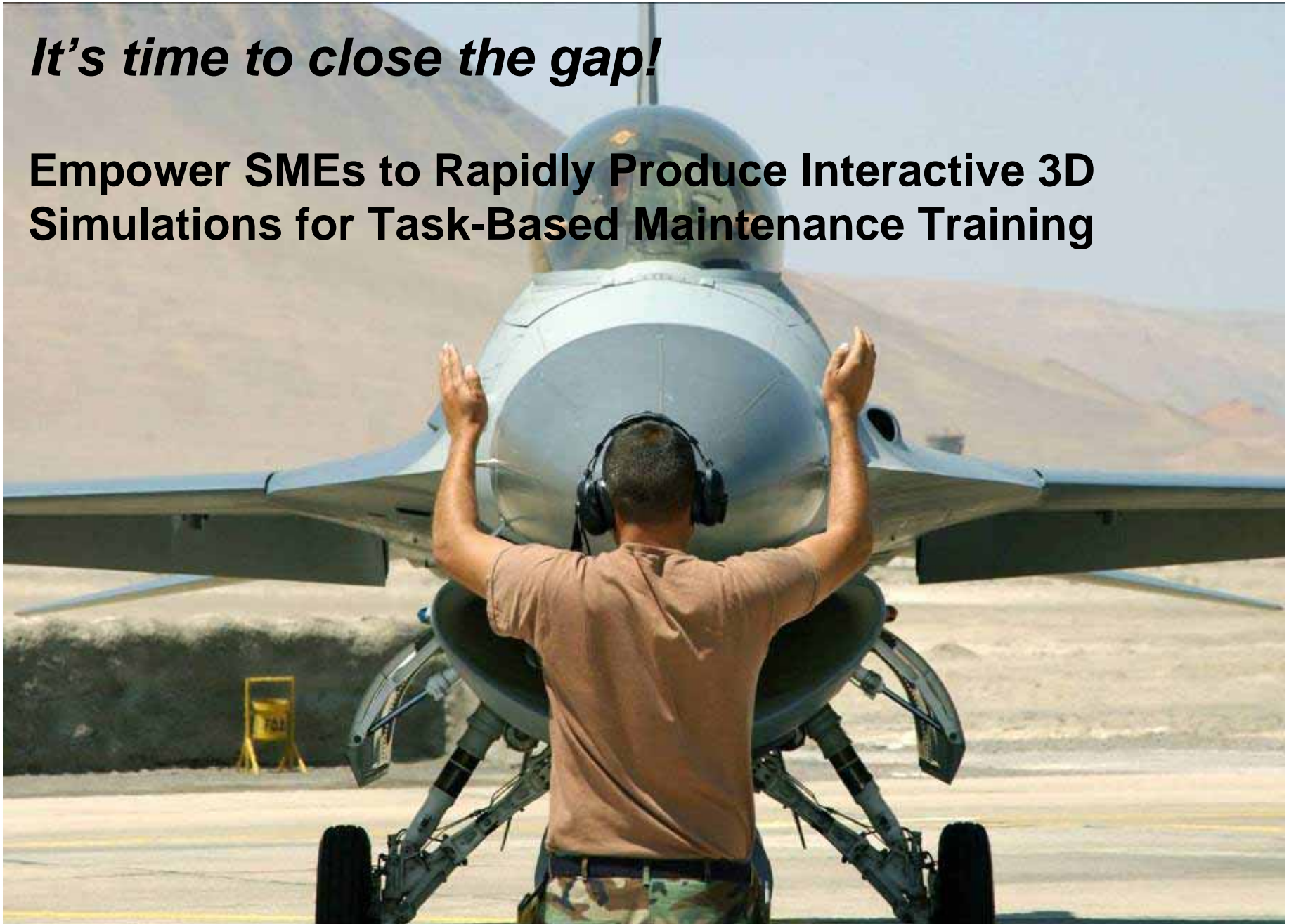
**Griffon Helicopter
Caterpillar C-12 Engine Model
100 Landmine models
C-7 Rifle (M-16 Mod 4)
Medium Girder Bridge (MGB)**



**M61A Vulcan Gatling Gun (F-16)
M9**

It's time to close the gap!

Empower SMEs to Rapidly Produce Interactive 3D Simulations for Task-Based Maintenance Training



Thank you!



**For Case Studies
and Papers:**

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