

Forging Adaptive Leaders: Revolutionizing Leader Development with Interactive Technology



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Why technology and leader development



- High operations pace
- Rapid leader turnover
- Resource constraints

An evolving view of leader development

- “The US military must overcome the way it has trained and educated leaders. Defense officials are moving ahead to overcome Cold-War era training to create a new generation of leaders who aren't constrained by what the doctrine says.”

GEN Richard B. Myers, CJCS (2004)

- “Future battlefields require a more liberally educated, mentally adaptable leadership to coexist in a culture with high standards of cohesion and discipline.”

COL (Ret.) Robert B. Killebrew (2002)



The goal: building adaptable leaders

- Ability to transition from
 - Stability and Support Operations to
 - Asymmetric combat, and back again
- Demands very different skill sets
 - Decision making is critical
 - Creative thinking
 - Experimentation with doctrine
 - Prudent risk-taking
 - Self-awareness
 - Focus on human understanding



The ideal training situation would offer



- Low cost of repetition
- Ease of changing complexity
- Requires decision-making
- Involves leading a team and communication
- Feedback on adaptability and outcome

Current technology can meet these goals!

“Two roads converged in a yellow wood . . .”

Business & Education Path

- Application
- Theory

Technology Path

- Gaming
- Virtual Reality

Leader Development Process

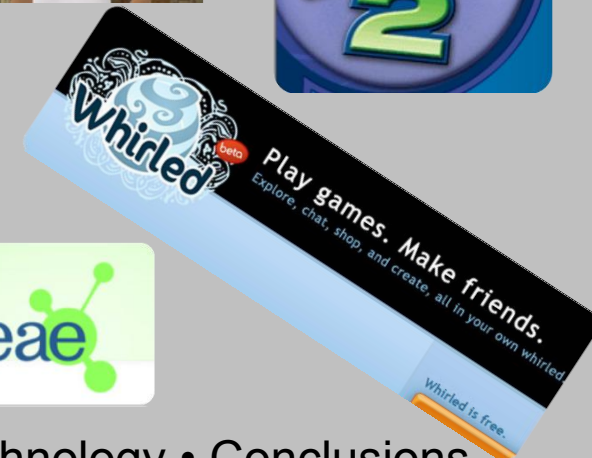
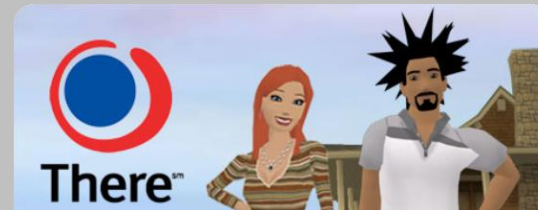
- Army Conclusions
- Other Applications

Business is starting to take advantage



Qwaq, Inc

- Holding meetings
- Training employees
- Increased workspace
- Marketing the brand



Business thought change driving adoption



Frederick Taylor

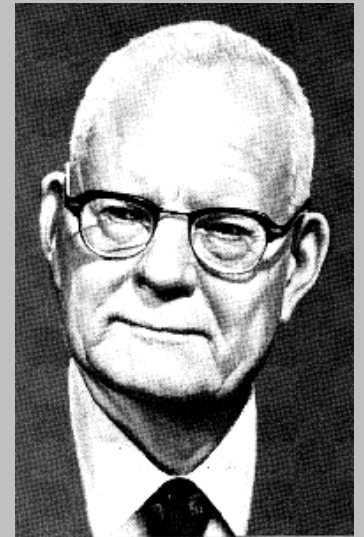
From:

- Taylorism and the Progressive Era
- Protocol and schedule
- Production lines

To:

- Improve quality & lower cost
- Toyota's revolution of operations management
- Employee empowerment

W. Edwards Deming

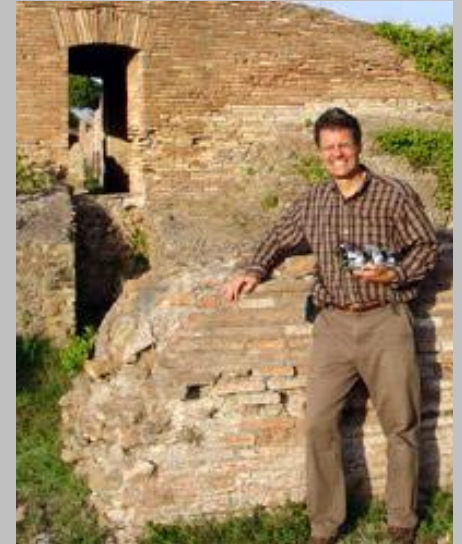


Education is at different points

- Information visualization
- Experiential learning
- Research discovery
- Behavior challenge



Ben Shneiderman



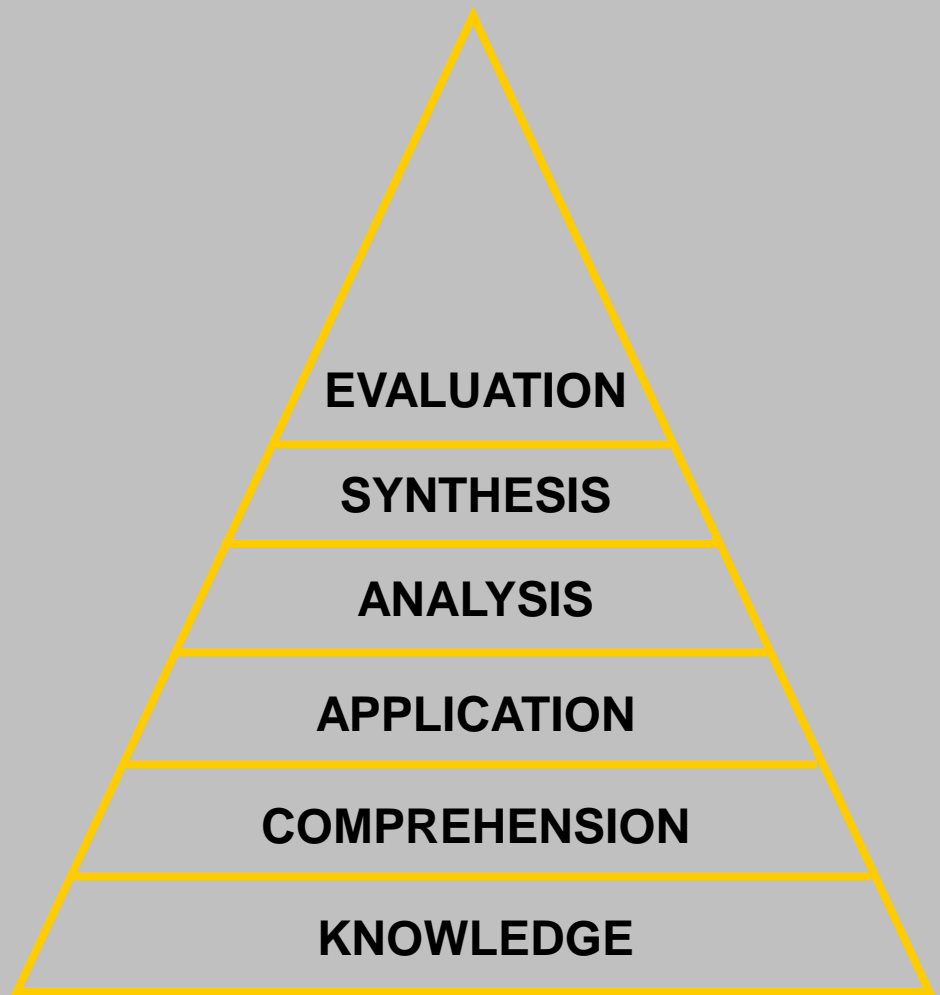
Roger Ulrich

usc Marshall



Lessons from educational theory

- How people learn
 - Active
 - Visual
 - Construction
- Challenge objectives



Bloom's cognitive hierarchy

Just two of many tech companies



- Started in 2002
 - Army project
 - Recruiting base
 - Semi-Immersion
 - State of art graphics
 - Biofeedback integration
- Started in 1999
 - Independent
 - Prototype only
 - Educational research base
 - Semi & Full Immersion
 - Pushing limits of AI & CGI

A marketing tool with scale & scope potential

HOME | FORUMS | REGISTER | YOUR ACCOUNT

THE OFFICIAL ARMY GAME[®]

AMERICA'S ARMY

GAME INTEL | REAL HEROES | DOWNLOADS | COMMUNITY | SUPPORT | MEDIA | ABOUT | U.S. ARMY

The Wait is Over
Now Available!
The Only Game Based on the Experiences of Real U.S. Army Soldiers.
Taking you deeper into the ranks, with the most realistic training, and unparalleled missions.
Where leadership and teamwork earn you exclusive prizes from the U.S. Army. Click here to learn more.
Developed by Gamers

NEWS & ARTICLES | **FORUM HOT TOPICS**

1 2 3 4 5

TOURNAMENT FRONT: HOSTS AMERICA'S
Date: 28 APR 08
Tournament Front has recently added a new *America's Army* section. Tournament Front strays away from your traditional online competition site. There, users can create their own tournaments at anytime with their own rule sets. These tournaments can be either for fun, bragging rights or for credits that can be redeemed for cash. User registration at Tournament Front is free. [Read More]

TRUE SOLDIERS | VAE | GAME FEATURES | MISSION DEPOT | EVENTS

MBS

SQUAD ROLES

Grenadier
The grenadier is a key member of the U.S. Army fire team. Armed with an M16 and M203 grenade launcher, the grenadier can deliver explosive fire at point and area ... [Read More]

PREV ← → NEXT

INTELLIGENCE

NETWORK STATUS

A A F I

USER STATS

Honor 0-20	93.97
Honor 21-40	3.83
Honor 41-60	1.23
Honor 61-80	0.61

Meet our new Real Heroes:

SSG Timothy Nein
- I will never accept defeat

SGT Jason Mike
- I will never leave a fallen comrade

Learn how they exemplify these principles of the Warrior Ethos.

CURRENT VERSION
Americas Army: Special Forces Overmatch
Version: 2.8.3.1

GET THE GEAR!

THE SEVEN CORE ARMY VALUES
RESPECT: Treat people as they should be treated.
★ [Learn More] ★

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TEEN T

The presence of logos, URLs or other information identifying private companies or other non-federal entities does not constitute an endorsement by the Department of the Army or the Department of Defense.

Tested by Heroes

AMERICA'S ARMY TRUE SOLDIERS
click here for more information.

- Recruiting support
- Story telling
- Basic Soldier skills
- Vehicle & weapon simulators
- Educator resources

Beginning to build adaptive leader tools

- Cultural Awareness Trainer
- Instructor Controlled Scenarios
- AAR Capability



ICT has many leader development projects

- Army Excellence in Leadership
- Web based, film case studies
- Adaptable to the classroom
- Ability to connect users
- Instructor modified



A unique collaborative learning approach

FOURTH FRAME FORUMS

"Some clarification, Sir"

AT THE COMMAND POST, CPT YOUNG MEETS WITH HIS XO AND ESG...



CPT YOUNG, SIR! WE'RE READY TO ROCK AND ROLL TODAY

TOP AND I ARE READY TO GIVE YOU A FULL SITUATION REPORT BUT WE WOULD LIKE SOME CLARIFICATION ON ONE THING

SIR, CAN OUR MEN TAKE SOME INITIATIVE ON THIS MISSION, OR DO YOU WANT TO BE BRIEFED ON EVERYTHING THAT COMES UP?

What would you say in this situation? Type directly into the balloon above and explain why in the box below, then press the submit button

submit your 4th frame

Thread Subject	Poster	Date	Replies
	Yes, You are allowed to use your own judgement. The soldiers have the first-hand information on the fields, it is better to trust their insights ...	admin 2006/05/04 14:06	1
	Use your head. If you are unsure about something, then take it up with me. Otherwise, get it done! The captain needs to make sure that the men know that he trusts their judgment, but ...	admin 2006/05/04 16:03	0

Episode

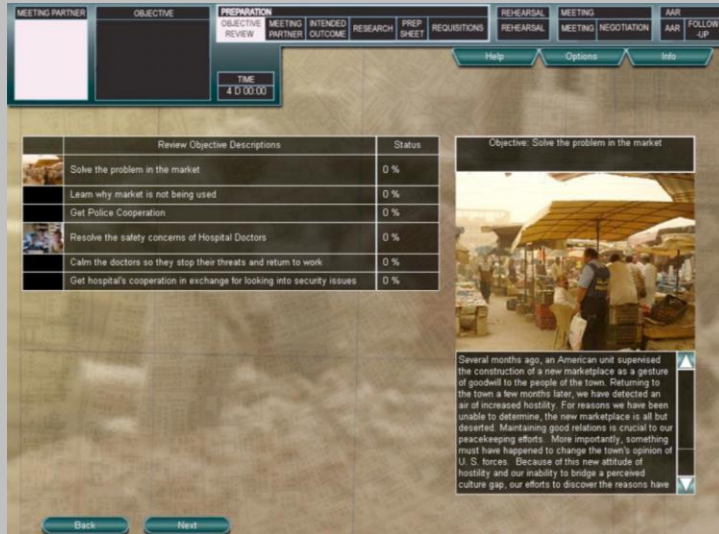
User entry

User explanation

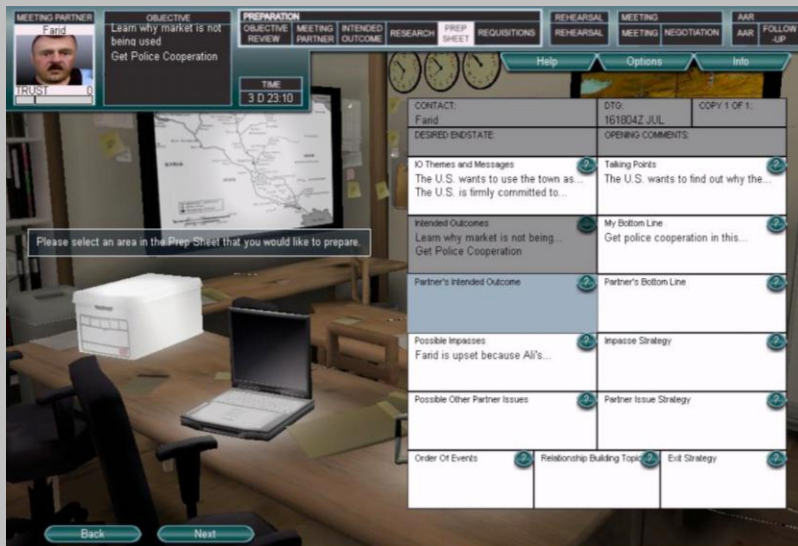
Previous user entries

Source: Andrew S. Gordon, ICT

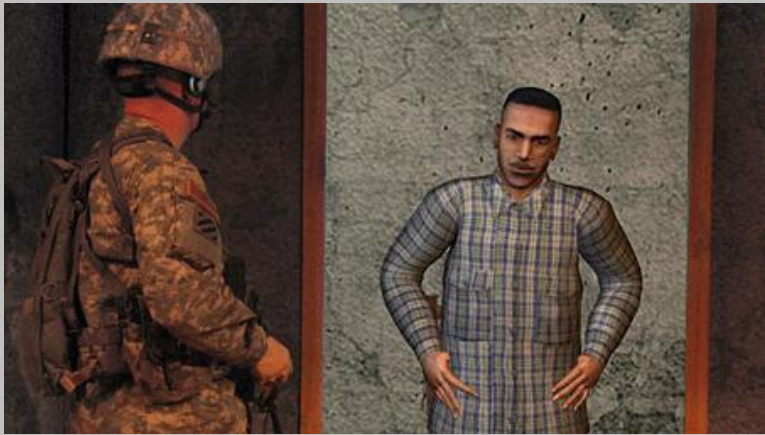
Start with semi-immersive negotiations



- Real problem based
- Preparation focused
- AI component
- Computer prompt



With the possibility for fully immersive



- Separate parties, different motivations
- Increased complexity
- Cognitive building AI
- Hope to start testing soon



Mixed reality enhances full immersion



- Sounds, smells, effects
- Ability to change situation
- Requires quick decision making



Technology incorporates adaptability

Army Schoolhouse
& Field Training



**Triad
of
leader development**

Formal Education

Experienced-based
Learning

Source: Briefing by MAJ (Ret.) Donald E. Vandergriff

Author of Raising the Bar: Creating and Nurturing Adaptability to Deal with the Changing Face of War

Current challenges to implementation

- Adoption throughout is tough
- Perception of “gaming” not “training”
- Keeping tool focus general
- Realistic design
- Project ownership
 - Individual proponent
 - Prototype handoff
- Success metrics hard to gather
- Development costs

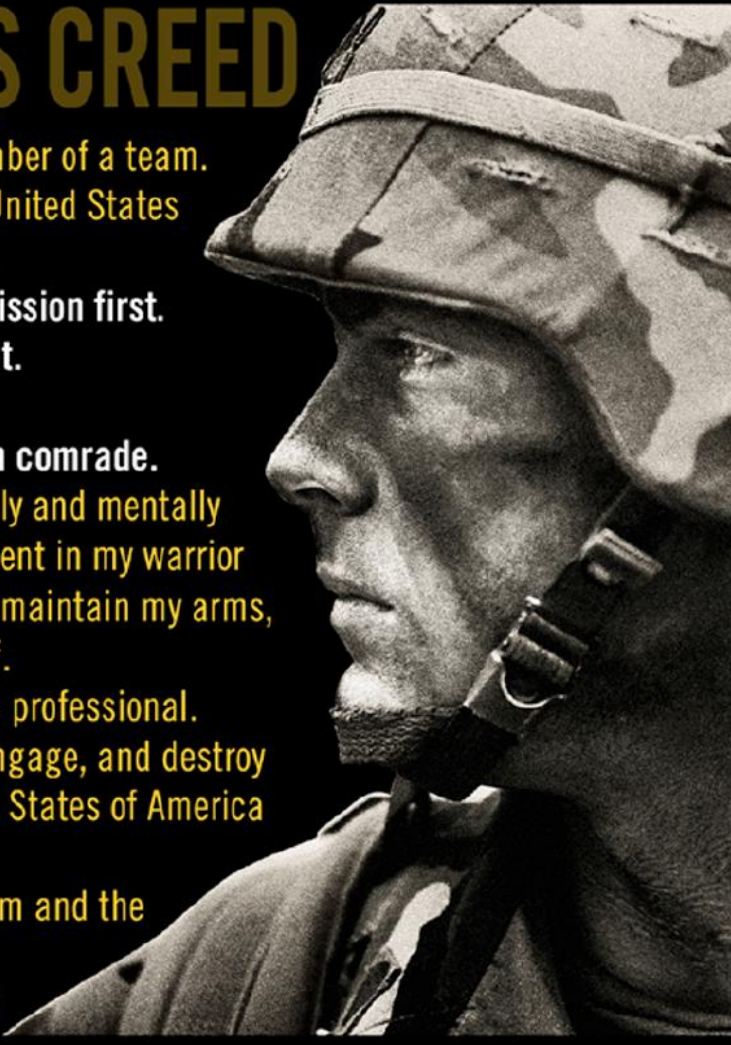


Opportunities for success

- Experiential learning demand
- Web 2.0 delivery
- Distribution to lowest level
- Consistency in training
- Systems truly teach “how to think”
- Competition pushes everyone
- Research collaboration
- Alternative to current training



What thoughts or questions do you have?



SOLDIER'S CREED

I am an American Soldier.
I am a Warrior and a member of a team.
I serve the people of the United States and live the Army Values.
I will always place the mission first.
I will never accept defeat.
I will never quit.
I will never leave a fallen comrade.
I am disciplined, physically and mentally tough, trained and proficient in my warrior tasks and drills. I always maintain my arms, my equipment and myself.
I am an expert and I am a professional.
I stand ready to deploy, engage, and destroy the enemies of the United States of America in close combat.
I am a guardian of freedom and the American way of life.
I am an American Soldier.



Back Up Slides

Ideas follow previous work

Today's Culture

Stress "process"
Forecasting
Risk aversion
Bureaucratic
Top-down
Rank equals success
Change is criticism
Adherence to process

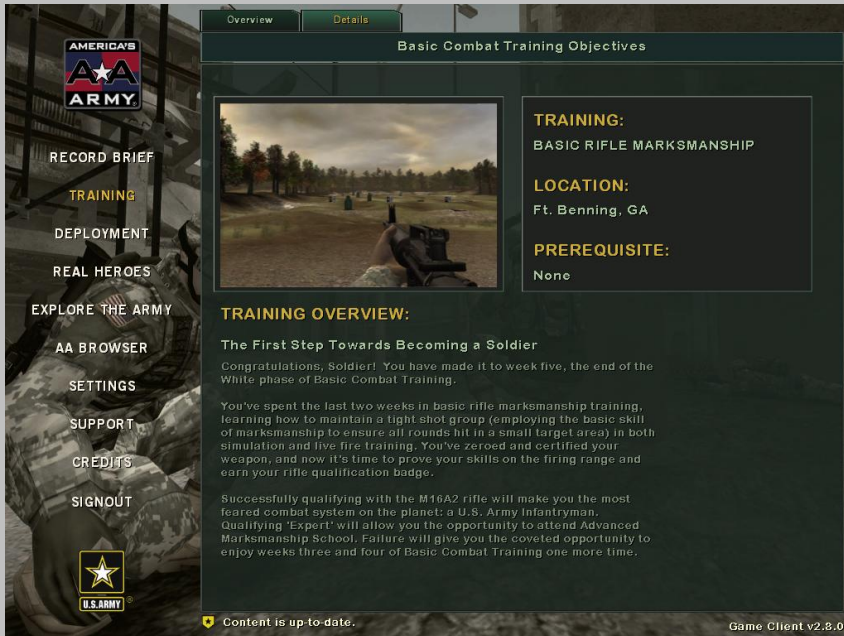
Evolving Army Culture

Stress "innovation"
Experimentation
Prudent risk-taking
Agility
Feedback loops
Contribution valued
Change is evolutionary
Achieving the objective

Source: Briefing by MAJ (Ret.) Donald E. Vandergriff

Author of Raising the Bar: Creating and Nurturing Adaptability to Deal with the Changing Face of War

Increases training understanding



- Basic Soldier skills
- Unit missions

Enhances recruiting & Soldier prep

- Future Soldier Trainer
- Virtual Army Experience
- Future Soldier Training System



Tools to train the force



- Vehicle, weapon, & equipment trainers
- Simulators
 - Individual and Teams
- Biofeedback integration

Leveraging game for an educator resource

- Activity Based, Hands-On Learning In:
 - Math & Science
 - Technology
 - Computer Science
 - Art, Animation, & Graphic Design
 - Sports & Nutrition
- Real World Applications
- High-Tech Platforms



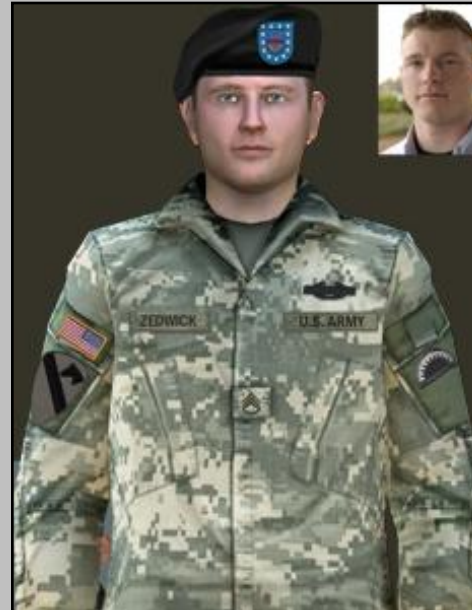
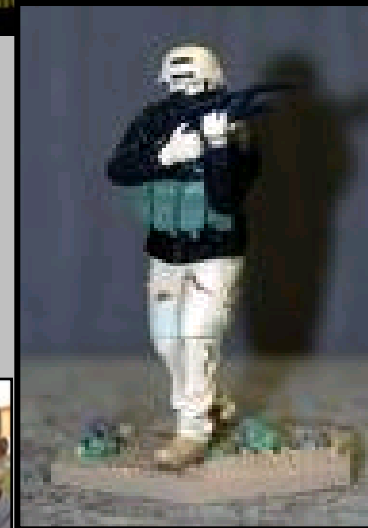
Real Heroes Program

Highlights the accomplishments of Soldiers who have distinguished themselves in combat.

They provide young adults with aspirational examples of how Soldiers from across America make profound contributions in the defense of freedom.

Program Features:

- **Videos**
- **Web Content:**
 - **Photos**
 - **Biography**
 - **Ribbon Rack**
- **In-Game Screen Characters**
- **Action Figure**
- **PR Campaign**



Building awareness through stories

REAL HEROES ★

SERGEANT TOMMY RIEMAN

America's Army: Real Hero


During Operation Iraqi Freedom, Sergeant Tommy Rieman distinguished himself by acts of conspicuous gallantry and courage under fire...

"I ALWAYS WANTED TO BE G.I. JOE"

Tommy Rieman recounts that from a young age, role models had a profound influence on his interest in joining the Army. Three of his uncles served in the Army. One served in Special Forces and two served as recruiters.


As a kid I always wanted to be GI Joe, and as a teenager, I either wanted to play college football or join the Ar...

[read more >>](#)



HERO OVERVIEW	PHOTO ALBUM	PERSONAL AWARDS	UNIT AWARDS	SKILL BADGES	HERO VIDEOS	HERO BIOGRAPHY	HERO BLOGS
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FLASH 8 VIDEOS ★



SGT TOMMY RIEMAN

Sergeant Tommy Rieman was awarded the Silver Star for bravery and courage while he and his team were ambushed during a surveillance mission deep behind enemy lines in Iraq. View the movie [here >>](#)

Viewing 1 of 1 ↑

Research Approach • Education • **Technology** • Leader Development • Conclusions

ICT takes a different approach

- Discovery & research focus
- Pushing limits of AI and CGI
- Very strong education minded focus
- MANY projects



SGT Starr

Gaming element still exists



Research Approach • Education • **Technology** • Leader Development • Conclusions

Immersion to the next level

- Marines Immersive Infantry Trainer (Camp Pendleton)
- Shoothouse to another level
- Rapid decision making
- Unit level exercise



What thoughts or questions do you have?



Introduction to Research • Business & Education • Technology • **Conclusions**