



# WARGAMES FOR COMMAND DECISION SUPPORT

MSG 177

Presented by **Iain McNeil** – CEO Matrix Games & Slitherine



SATELLITE  
KH-11

# Who Are We?

# INTRODUCTION

01

Slitherine works with major license holders like the History Channel, Sony (Starship Troopers), Universal (Battlestar Galactica), Games Workshop and more

02

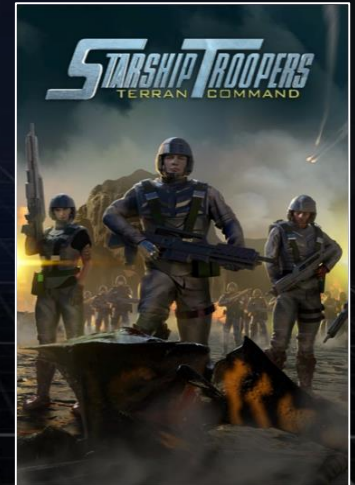
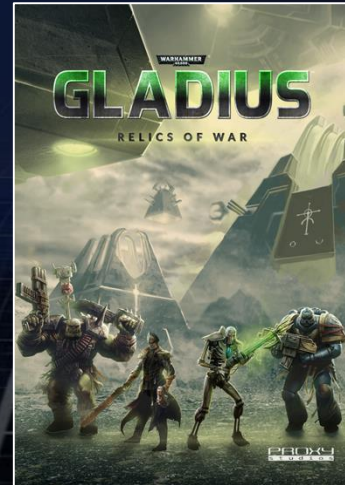
Matrix Games is the undisputed world-leading publisher of digital wargames.

03

With offices in US, UK, Canada, France, Italy and Romania, it has a very specialist focus on highly detailed turn-based strategy videogames.

04

Matrix manages a range of products that span every historical period and scale, from tactical to high-level operational and even strategic.



# PENTAGON INVOLVEMENT

Visit to Epsom by Omar Mendoza -  
Senior Plans and Programs Engineer  
(science, technology and engineering), Maj General  
Dylewski & support team

Detailed modelling,  
simulation, and analysis tool.



Flexibility, allows adaptation  
to suit your specific needs and  
classified data.

Run and test simulations as  
often as necessary; results instantly available.

# PROFESSIONAL CLIENTS



## Luftwaffe

The Luftwaffe started a project to train all new officers using Command. Major Thomas Sillier created the initiative and used Command to transform their education from a power point based approach to an interactive one.



AMC used Command for fuel planning. Up to then all planning was done in excel spread sheets and it was possible to simulate the effects of enemy action on fuel planning



AFRL were using Command to help guide early innovation funding. A physics based simulation like Command lets you see all the emergent behaviour that experts



The Munitions Directorate at Eglin AFB have started a Phase II SIBR to use research the use of Command.

# HOW COMMAND INFORMS DECISIONS

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## ARRW HYPERSONIC MISSILE SYSTEM

As the global race for hypersonic weapons intensifies, the U.S. military just decided to abandon one of its fundamental prototype programs. .... It was estimated to cost as much as \$928 million over the course of its lifetime. As the global race for hypersonic weapons intensifies, the U.S. military just decided to abandon one of its fundamental prototype programs. .... It was estimated to cost as much as \$928 million over the course of its lifetime.

<https://www.military.com/daily-news/2020/02/11/air-force-cancels-hacksaw-hypersonic-weapons-program.html>



## IRON DOME SYSTEM

The US Army plans to buy two Israeli-developed Iron Dome batteries and deploy them next year as a first step in a new \$1.7 billion project to both provide American troops an interim defense against cruise missiles and also explore long-term adoption of Iron Dome components for use in a major US air and missile defense system.

<https://www.timesofisrael.com/us-to-buy-two-iron-dome-batteries-as-first-part-of-1-7b-missile-defense-project/>

# OUR GAMES



Combat Mission

- Tactical ground based
- Full 3D
- DSTL
- Realistic physics and behaviour modelling

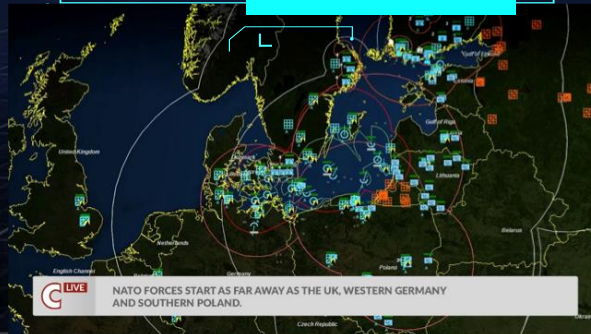
Flagship professional simulation

Multi-domain physics based battlespace

Real physics to model sensors, propagation, movement and kinetic effects

Covers air, sea, land, sub surface, space and cyber

Command



Operational scale ground based

OODA loop system DSTL

Effects based top down model plus physics

DSTL & NSXTL

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# How Do We Train Now?





# CURRENT TRAINING FOCUS

Pilots & Weapons Officers



Drivers / Gunners



Infantry

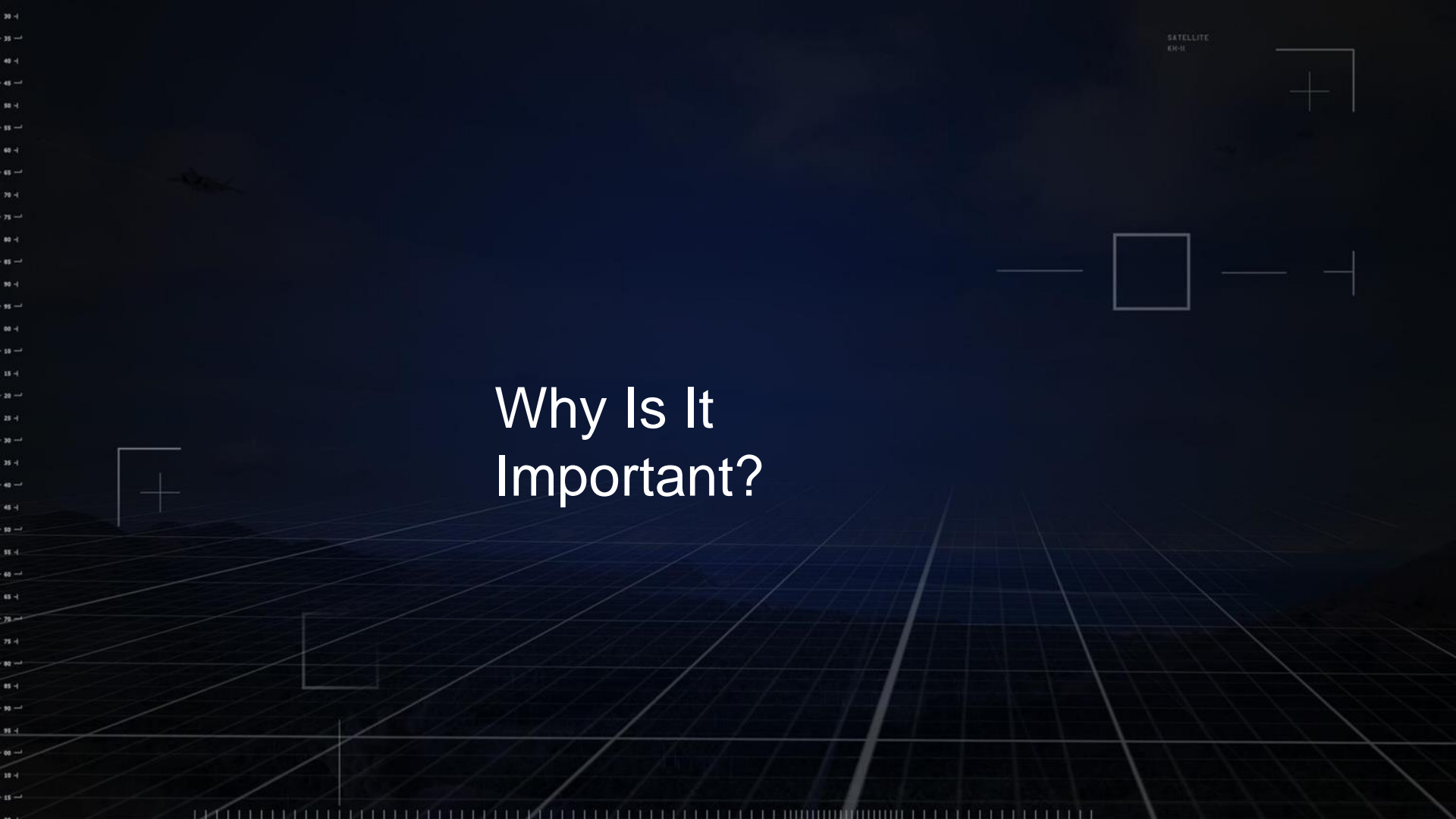


# HOW DO SENIOR LEADERS TRAIN?



- Plan COA on paper or in planning tools but don't see the results
- Wargaming is almost exclusively manual  
Very few opportunities, 0-2 times a year
- The more senior the less opportunity
- Very expensive to arrange, lots of people and time
- Not scalable
- Very public
- Risk of failure, peer pressure, dissuade experimentation

# Why Is It Important?



# WHY IS IT IMPORTANT?



- The more senior the leader the more impact the decision
- Decisions made at the senior level impact the ground situation at the tactical level
- History shows time and again that great military leaders can win battles against the odds
- Military leaders are a force multiplier, for good or bad
- As a result good senior leaders have more impact on the battles than junior officers
- Conclusion - it is more important to train senior leaders than junior officers

# HISTORICAL EXAMPLES

- Hannibal was outmatched in numbers and quality
- Hannibal put his lighter infantry in the middle, set forwards, but expecting them to be pushed back
- His most reliable infantry on the flanks to hold their ground
- His superior cavalry to push back the Romans flanks
- The Romans advanced and angled towards the nearer middle of the line, reducing their frontage
- Hannibal's centre fell back steadily, his infantry flank held and his cavalry destroyed the Romans
- The result was a double envelopment that created the
- This was all the result of great leadership and not the individual ability of the Roman vs Carthaginian soldier





Manstein's invasion of France



Napoleon's invasion of Russia

# HISTORY REPEATS ITSELF

- This is not just a history lesson. This pattern repeats through every war throughout history
- Napoleon at Austerlitz
- Manstein's invasion of France
- Similarly bad decisions put soldiers in situations where their individual skills simply cannot save them
- Napoleon's march on Moscow
- Hitler's invasion of Russia



Napoleon's Victory at Austerlitz



Hitler's invasion of Russia

# OUR EXPERIENCE



- We've run wargames for a number of clients
- Common issues - lack of familiarity with own equipment (that they don't personally use) and especially red equipment
- Basic mistakes
- Flying B2 at day, stealth worked but spotted visually
- No thought about airport capacity. Trying to place so many aircraft they were in the parking lot and on the road
- Launching the AWACs last, meaning the engagement had begun before it got airborne due to traffic

# What Are The Problems?





# TOO MUCH FOCUS ON FRONTLINE



# ITS ALL ABOUT THE GRAPHICS

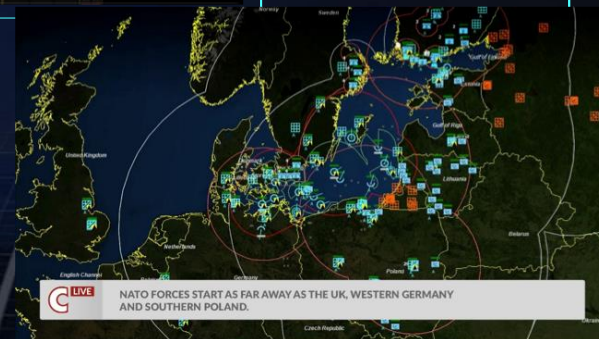
- Tactical decisions require a realistic 3D view
- Operational decisions require an abstracted
- View needs to be relevant to the decision level
- All current focus is on improving 3D view
- Fast moving complex multi domain simulations require better tools to visualise & help make decisions.



Combat Mission



VBS



Command

# THE STOVEPIPE PROBLEM

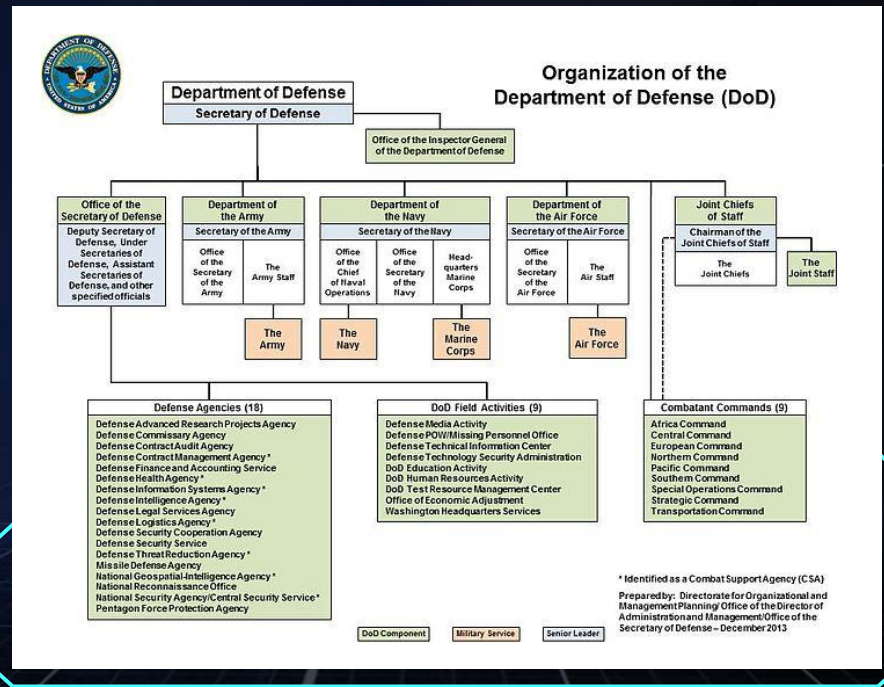
■ In many organisations, agencies and layers

■ Classification issues prevent sharing

■ Areas of responsibility mean thinking is compartmentalised

■ Funding is compartmentalised

■ Force structures are compartmentalised



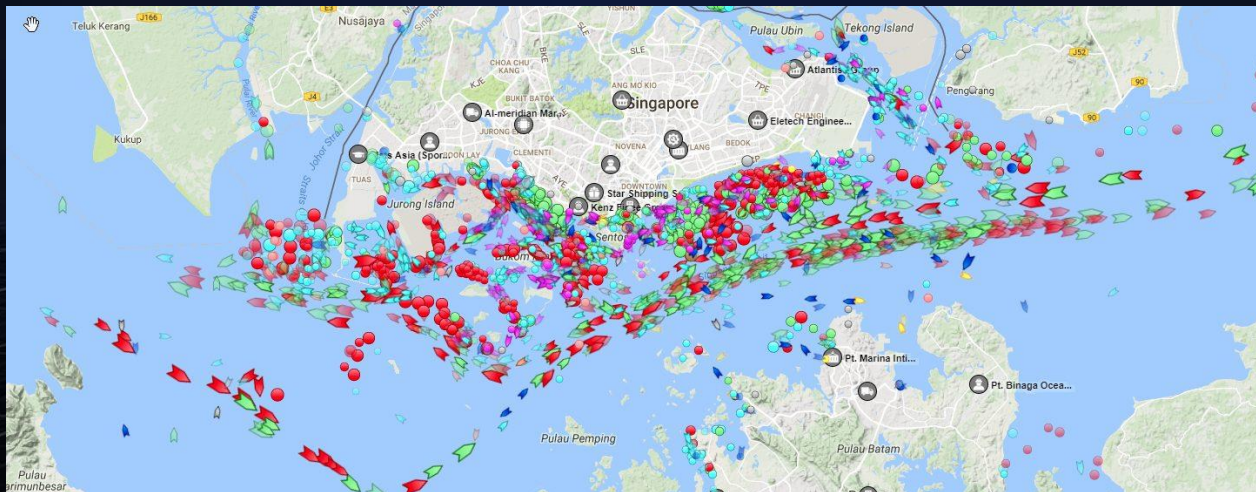
# How Can We Do It Better?



Future complex multi domain operations require a holistic approach looking at the entire battlespace

Consequences of actions (or inaction) need to be understood within all domains. This cannot be achieved by looking at power points – commanders need to see it happen.

Overwhelming amounts of information from integrated sensors will require new techniques to parse, and practice to master for commanders



# THE FUTUR E

- Stop focusing on from training pilots & soldiers (because its easier and they are more numerous)
- Understand that the more senior the Commander the more important it is they make good decisions
- Practice makes perfect in every other profession so why would we not apply this to Command Decisions
- We need better tools to help decisions makers understand the future battlespace to allow better training and to deploy these solutions to the battlefield





# QUESTIONS?

For more info mail:

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Or visit:

[www.matrixgames.com/pro-software](http://www.matrixgames.com/pro-software)

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