The Importance of Wargames/Simulations in both Military and Business Environments

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The Big Question: What Should I Do Now?
Some Decide on Mergers & Acquisitions
Many of Which Don’t Work Out
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Management Fads 1950 – 2000s
Cost Cutting – Often to Extremes
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Marching Off Into The Unknown
Financial Ruin
Sciences have Specific Answers to Specific Problems

\[ H = - \sum p(x) \log p(x) \]

You can learn how to find the specific correct answer
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Paint

“The Night Sky”

In Art, There are Many Possible Ways
Stories are Powerful Teaching Tools
Story’s “Stick with Us”
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Business Environment
Military Environment
Uses Stories from World War I to Discuss Business Issues

Available on Amazon.com
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Unfortunate Leadership Similarities

ENRON Board and Executives

Austro-Hungarian General Staff
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A Popular Book that Influenced Decision Makers

A.T. Mahan
With 28 Maps and Plans of Naval Battles

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The Fad:  
Build a Battleship Fleet

The Unknown Territory:  
No Prior Sea Tradition
Dissipation of Resources, No Realized Benefits

End Result – Written Off
History Repeats Itself

People in Every Age Do the Same Things for the Same Reasons
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The Lessons of these Stories are Applicable Today
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What Can You Tell about This Plan?

What are Its Chances for Success?
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Wargames Provide Detailed Insight into Operations

Der Weltkrieg – Situation in Belgium – Aug 1914
Wargaming Improves:

- Strategy Formulation
- Planning
- Coordination
- Proper Resource Allocation
- Execution
- Project Management
Stratego Battlefield – Center, Left & Right Flanks
Common Stratego Deployments
Winning Strategies involve Concentration
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A Modern Business Story

Texas Instruments
The TI Business Battlefield

Micro-Processors

Memory

Graphics Chips

Logic Circuitry

Digital Signal Processors

- Intel
- AMD
- Samsung
- ATI
- Micron
- Silicon Graphics
- Toshiba
- NVIDIA
- Motorola
- CIRRUS LOGIC
- Lucent Technologies

The TI Business Battlefield Redeployment
The Levels of Understanding

Objective is to Help People Get to Deeper Levels
A Musical Analogy

Shallow Level - Listening

Medium Level - Reading Music

Deepest Level - Playing an Instrument
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They Look Pretty Daunting, Don’t They?
Who would choose this method to learn to play an instrument?
Learning Something Complicated Requires Instruction & Mentorship
My First Wargame

France 1940
- 16 Pages of Rules
- Hundreds of Pieces
- No Instructor made for Difficult Learning
Aides to Wargame Training
Computer Based Tutorial Videos

Guides new players through the basic rules and concepts, using numerous examples.
Training in Wargames/Simulations

Both Military and Business Need to do Better at Training Leaders in Wargames and Simulations
What We Need to Do:

• Motivate Others to Learn to Use Wargames/Simulations

• Provide Ample Training in Using Wargames

• Make Ability to Use Wargames a Prerequisite for Reaching Senior Decision Making Levels
Wargaming 101:

• Teach the Mechanics and Techniques of Wargames and Simulations

• Use them to provide Insight through Immersion in Decision Maker roles

• Use them to Analyze Strategies and Options
Simulating Complex Situations

Tracking the Explorer Satellite

- A True Story
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Tracking -
The Options
Satellite Tracking

The Back-Up Solution
Core Issues for Simulations

• Critical or Bottleneck Resources
• Fundamental Cause/Effect Relationships
• Core Processes
• Clear Picture of Operating Environment
War In Europe
Computer Based Simulations
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The *Der Weltkrieg* Game Series

Available through [www.spwgame.com](http://www.spwgame.com)
The Der Weltkrieg Game Series

The Schlieffen Plan plays out in Western Front
The Der Weltkrieg Game Series

Consolidated Map of European Fronts

From the Vassal Computer Engine Module
Foundations of *Der Weltkrieg* Design

- 50% of WW1 Casualties caused by Artillery

- Artillery Ammunition was Bottleneck Resource

- Attacker needed 3 times Defender’s Strength for Parity in Results
Core Cause & Effect Relationship

50% of WW1 Casualties caused by Artillery

Basic Infantry/Artillery Structure of French Division
The Bottleneck Resource
Artillery Ammunition
Core Process = Combat

Attacker needed 3 times Defender’s Strength for Parity in Results
### Der Weltkrieg Combat Results Table

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**Range of Results Based on Strength Brought to Bear**
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Der Weltkrieg GameTurn Sequence

Normal Turn

Reinforcement Arrival Phase

The Phasing Player places reinforcements scheduled for the current turn onto their placement hexes on the map.

Movement Phase

The Phasing Player may move any or all of his units up to the limits of their Movement Allowances.

Combat Phase

The Phasing Player may initiate combat with any of his units that are adjacent to enemy units.

Replacement / Recombination Phase

The Phasing Player may recombine units or replace those that have been removed from the map.

Complexity vs Playability

The Big Trade-Off in Wargames
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A Relatively Complex Game Turn Sequence (and this isn’t even all of it)

4.1 Weekly Interphase (at the beginning of each game turn)

The Weekly Interphase consists of a Strategic Phase followed by the Impulse Determination Phase.

4.2 Impulse Determination Phase

The participant with the initiative is determined, according to the provisions in the Exclusive Rules. He may elect to become the 1st Player, the 2nd Player in the Sequence of Play, or decline to make an impulse. The participant with the initiative announces how many impulses there will be in the game turn, and how many days each impulse will consist of. This is done once per game turn during this phase.

4.2 Each Impulse

Each impulse is broken down into four phases for each participant. These are the Command Phase, where supply and command control are determined, the Movement Phase, the sequence in which the player may move his units, the Co-ordinate-Movement Phase, where the playing player may move his units, and the Combat Phase. Each phase is described below.

4.2.1 The 1st Player’s Command Phase

This phase consists of two segments: a Mission Order Segment followed by the Supply and Command Segment. These are described below.

A. The Mission Order Segment:

To begin this segment the 1st Player may make any Mission Orders (MOs) he desires. MOs may include setting forces to an alert status, causing units to deploy to new locations, having units provide support to adjacent units, and almost anything else he desires. This is a zero cost, zero resource, zero unit availability type of order. The 1st Player may also order a 1-day supply replenishment. Two defensive units may be ordered into a non-combat zone.

4.2.2 The 1st Player’s Movement Phase:

This phase consists of a Co-ordinate Segment followed by the Movement Command Segment. These are described below.

A. Co-ordinate Segment:

All units may move one segment the 1st day of each game turn. This movement is limited to the space available on the map. Moves are limited to the Co-ordinate Combat Chart. Any unit may move only one segment in any direction during this phase. Movement may only be in straight lines and points may be changed only once per game turn.

B. The Movement Command Segment:

All units may move one segment the 2nd day of each game turn. This movement is limited to the space available on the map. Moves are limited to the Co-ordinate Combat Chart. Any unit may move only one segment in any direction during this phase. Movement may only be in straight lines and points may be changed only once per game turn.

4.2.3 The 2nd Player’s Movement Phase:

This phase consists of a Co-ordinate Segment followed by the Movement Command Segment. These are described below.

A. Co-ordinate Segment:

All units may move one segment the 1st day of each game turn. This movement is limited to the space available on the map. Moves are limited to the Co-ordinate Combat Chart. Any unit may move only one segment in any direction during this phase. Movement may only be in straight lines and points may be changed only once per game turn.

B. The Movement Command Segment:

All units may move one segment the 2nd day of each game turn. This movement is limited to the space available on the map. Moves are limited to the Co-ordinate Combat Chart. Any unit may move only one segment in any direction during this phase. Movement may only be in straight lines and points may be changed only once per game turn.

4.2.4 The 3rd Player’s Movement Phase:

This phase consists of a Co-ordinate Segment followed by the Movement Command Segment. These are described below.

A. Co-ordinate Segment:

All units may move one segment the 1st day of each game turn. This movement is limited to the space available on the map. Moves are limited to the Co-ordinate Combat Chart. Any unit may move only one segment in any direction during this phase. Movement may only be in straight lines and points may be changed only once per game turn.

B. The Movement Command Segment:

All units may move one segment the 2nd day of each game turn. This movement is limited to the space available on the map. Moves are limited to the Co-ordinate Combat Chart. Any unit may move only one segment in any direction during this phase. Movement may only be in straight lines and points may be changed only once per game turn.

4.3 The 3rd Player’s Combat Phase:

This phase consists of a Combat Command Segment followed by the Combat Movement Segment. These are described below.

A. Combat Command Segment:

The 3rd Player selects one Combat Mission Order (C-MO) to be executed during this phase. C-MOs may include attacking a unit in the previous phase, creating a new force, or creating a new unit. The 3rd Player may only select one C-MO per game turn.

B. The Combat Movement Segment:

This phase consists of a Combat Command Segment followed by the Combat Movement Segment. These are described below.

A. Combat Command Segment:

The 3rd Player selects one Combat Mission Order (C-MO) to be executed during this phase. C-MOs may include attacking a unit in the previous phase, creating a new force, or creating a new unit. The 3rd Player may only select one C-MO per game turn.

4.4 The 4th Player’s Movement Phase:

This phase consists of a Co-ordinate Segment followed by the Movement Command Segment. These are described below.

A. Co-ordinate Segment:

All units may move one segment the 1st day of each game turn. This movement is limited to the space available on the map. Moves are limited to the Co-ordinate Combat Chart. Any unit may move only one segment in any direction during this phase. Movement may only be in straight lines and points may be changed only once per game turn.

B. The Movement Command Segment:

All units may move one segment the 2nd day of each game turn. This movement is limited to the space available on the map. Moves are limited to the Co-ordinate Combat Chart. Any unit may move only one segment in any direction during this phase. Movement may only be in straight lines and points may be changed only once per game turn.
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Der Weltkrieg Map Detail

Hexside Based Terrain System

Triples Amount of Terrain Info on Map without adding much to Complexity
Core Issues for Simulations

- Critical or Bottleneck Resources
- Fundamental Cause/Effect Relationships
- Core Processes
- Clear Picture of Operating Environment
Gaining the Advantage in Business
In Conclusion

• Wargames are Essential to Gaining Insight & Understanding
• We must actively Promote more Wargame Use
• Wargaming must be a Required Skill in the Military
• Businesses need Realistic Simulations of their Operations
• Businesses must Train Decision Makers to use Simulations
• Businesses should use Simulations to Evaluate Leadership Potential
QUESTIONS