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BRIGADE AUTOMATED MISSION ASSIGNMENT
MODEL FOR THEATER LEVEL SIMULATION

by

Grady H. Roby, Jr.

September 1992

Thesis Advisor:

William G. Kemple

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BRIGADE AUTOMATED MISSION ASSIGNMENT MODEL
FOR THEATER LEVEL SIMULATION

by

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Major, United States Marine Corps
B.S., United States Naval Academy, 1979

Submitted in partial fulfillment
of the requirements for the degree of

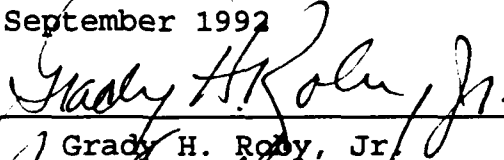
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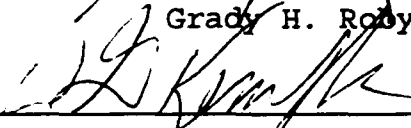
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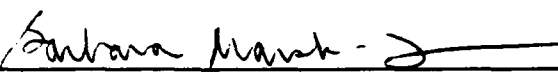
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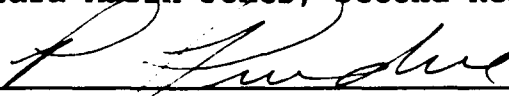
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ABSTRACT

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I. BACKGROUND AND STATEMENT OF THE PROBLEM

A. INTRODUCTION

Throughout recorded history, military leaders have devised methods of simulating warfare in order to better prepare themselves and their forces for battle. Unlike most professionals, who can daily apply their trade, military personnel only fully implement their profession during times of conflict. However, military personnel need to continuously train and study their profession to prepare for battle. Today computer driven wargames help theater commanders fulfill their needs to prepare themselves and their forces for combat.

Throughout this thesis, the term "wargame" represents a theater level simulation without human interaction after initialization.

Theater wargames serve three primary functions for the theater commander: first, to provide additional insight into an actual situation or postulated scenario; second, as a tool for training the theater commander's staff and subordinates; and third, as a primary method for research into, and evaluation of, operational concepts and methods, using different levels of resources. Theater wargames by

design, normally perform these three functions without the deployment of troops or the expenditure of munitions

[Ref 1:pp. 49-62].

Unfortunately, the great recent progress in computing capability has not lead to theater wargames that accurately reflect a theater commander's information gathering and decision making processes or the maneuver of his ground forces in a plausible manner. Typically, decisions to attack, defend or delay remain based solely upon the relative sizes of the opposing forces, a concept known as force ratios

[Ref 2:p. I-13]. The evaluation of situations based upon the doctrinal planning factors of **Mission, Enemy, Terrain** and weather, **Troops** and fire support, **Time** and **Logistics** known by the acronym "METT-TL" does not exist [Ref 3:pp. 5-1, 5-10]. This failure to reasonably represent the Command, Control, Communications and Intelligence (C³I) or decision making process, eliminates not only the "fog of war", a condition that effects military decision makers at every level, but also the ability to influence the outcome of a campaign by affecting an enemy's decision making process.

Lacking realistic decision making capabilities, current theater wargames restrict movement of forces to predesignated corridors throughout the simulations. Figure 1-1 displays an example of this limitation. The three parallel horizontal bars within each corridor represent the forward edge of the

battle area, known as the "FEBA." The dotted horizontal lines represent the boundaries between terrain types and the colors are the opposing force quantities within a corridor.

[Ref 2:p. II-7]

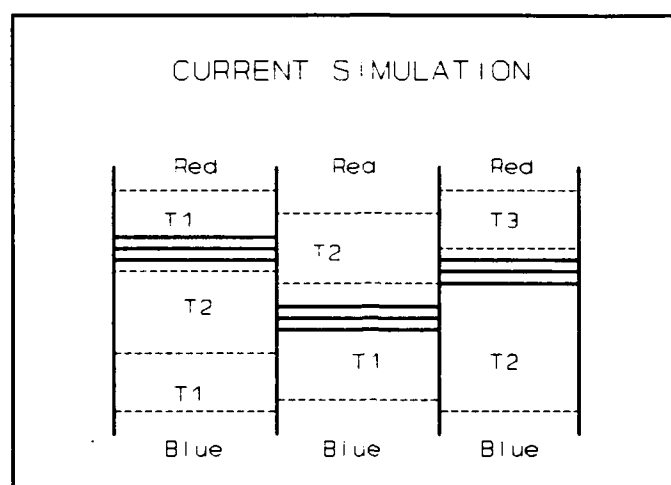


Figure 1-1.

This structure requires opposing forces to "fight" each other within predefined boundaries, nearly isolated from the influences of adjacent engagements, and unable to exploit the maneuver opportunities offered by adjacent terrain. This maneuver restriction prohibits such routine operational maneuvers as flank attacks, turning movements, encirclements, and single and double envelopments.

It is not surprising that results from theater wargames which do not incorporate the decision making process or the two dimensional maneuver of forces are rarely received with enthusiasm by theater commanders or their staffs.

In summary, existing theater wargames have a major flaw. They do not reflect the capability of ground units to integrate maneuver with intelligence and command and control as these terms are defined by the *Department of Defense Dictionary of Military and Associated Terms*, JOINT PUB 1-02.

- Maneuver - the two dimensional movement of ground units or the coordinated movement of ground formations to achieve an advantage over the enemy.
- Intelligence - the process of gathering, processing, evaluating and disseminating information of combat value within a force.
- Command and Control - the arrangement of personnel, equipment, communication facilities and procedures to plan, direct, coordinate and control the force.

B. STATEMENT OF THE PROBLEM

The Joint Chiefs of Staff are acutely aware of this problem. The Conventional Forces Analysis Division of their Force Structure Resources and Assessment Directorate (J-8), requested the Naval Postgraduate School to provide assistance in developing a Future Theater Level Model (FTLM) that would address this shortcoming. Specifically, the future model should focus upon the command, control, communications and intelligence (C³I) aspects of theater level conflict. This thesis attempts to solve a portion of the problem by developing a model for use within a theater wargame that reproduces a portion of the division commander's command and control process. The model simulates portions of the division command estimate using doctrinal planning factors based upon

gathered expert military opinion, a process that culminates in the ranking of evaluated brigades for mission assignment based upon a doctrinal review of the situation. The output from this model becomes a primary input to the movement algorithm of the wargame, permitting the optimization of the maneuver of ground forces.

C. SCOPE AND LIMITATIONS

This thesis models professional military decision-making. The model developed in this thesis assigns brigade missions based upon the combined influence of the following factors as evaluated by expert military judgment:

- Mission.
- Predicted enemy force composition.
- Each brigade's task organization.
- Training level of each brigade.
- Terrain at the mission location.
- Estimated trafficability conditions.
- Estimated visibility at the time of mission execution.
- Planning, rehearsal, coordination and resupply time.
- Availability of logistics support.
- Impact upon the brigade due to previous operations.
- Estimated engagement distances due to terrain, vegetation or man-made structures at the mission location.

Survey results capturing the experts' judgment of the above factors' combined influences upon brigade mission

assignment were analyzed using the Analytic Hierarchy Process (AHP).

The model does not account for the effects of either aviation or naval gunfire support on the ability of the brigade to accomplish its mission. These additional fire support means are deemed equal for all brigades and considered a constant for evaluation, ultimately having no effect upon brigade selection. The model also selects brigades without regard to location. Therefore, time constraints restricting the assignment of brigades to missions due to movement limitations have not been considered. The model does not address changes due to experience or training associated with theater operations. Finally, the model produced by this thesis does not consider changes to brigade task organizations during the mission assignment process.

II. MODEL

A. OVERVIEW

This thesis model assumes a theater level wargame that possesses the following general characteristics. The wargame has two major opposing forces, covers a specific region and operates with a six hour or less time step. The wargame may exist as an event step simulation.

Brigades fashioned after the US Army represent the smallest friendly maneuver element. Each brigade possesses a specific task organization consisting of reasonable combination of armor, infantry, mechanized infantry, and artillery battalions as well as engineer companies. When possessed by a brigade, artillery battalions provide direct support to the brigade. Artillery battalions supporting infantry brigades possess towed artillery, and artillery battalions supporting mechanized/armor brigades possess self-propelled artillery. Engineer companies assigned to brigades remain fully capable to perform mobility, counter-mobility and survivability tasks as appropriate for both infantry and mechanized/armor brigade missions.

The theater wargame identifies the brigades available for mission assignment by first examining mission priority. All missions developed by the simulation support the goals of the

appropriate side's strategic objectives. Brigades possessing higher priority missions than the most recently identified mission do not receive consideration for assignment. Brigades currently preparing for equal or lower priority missions do receive consideration for the most recently identified mission. Brigades remain in the state of mission preparation until contact with the enemy occurs. At this point, preparation time for that mission ends and the effects of continuous operations upon that brigade begin. A brigade deemed to be executing a mission will not receive assignment consideration. Figure 1-2 identifies a proposed integration of this thesis' automated assignment model with the Future Theater Level Model (FTLM). The solid bars indicate the locations where the thesis model interacts with the Future Theater Level Model.

The model developed by this thesis operates in three phases. The first phase evaluates each brigade's task organization with respect to an "ideal" task organization for the new mission. Senior Army and Marine field grade officers completed Brigade Task Organization Questionnaires to produce the data necessary for this phase. A sample copy of one of the questionnaires is located in Appendix A. The second phase estimates the brigade's organizational readiness for combat based upon four factors: the time available to prepare for the mission, the logistics status of the brigade, negative residual effects from recent combat, and the experience and

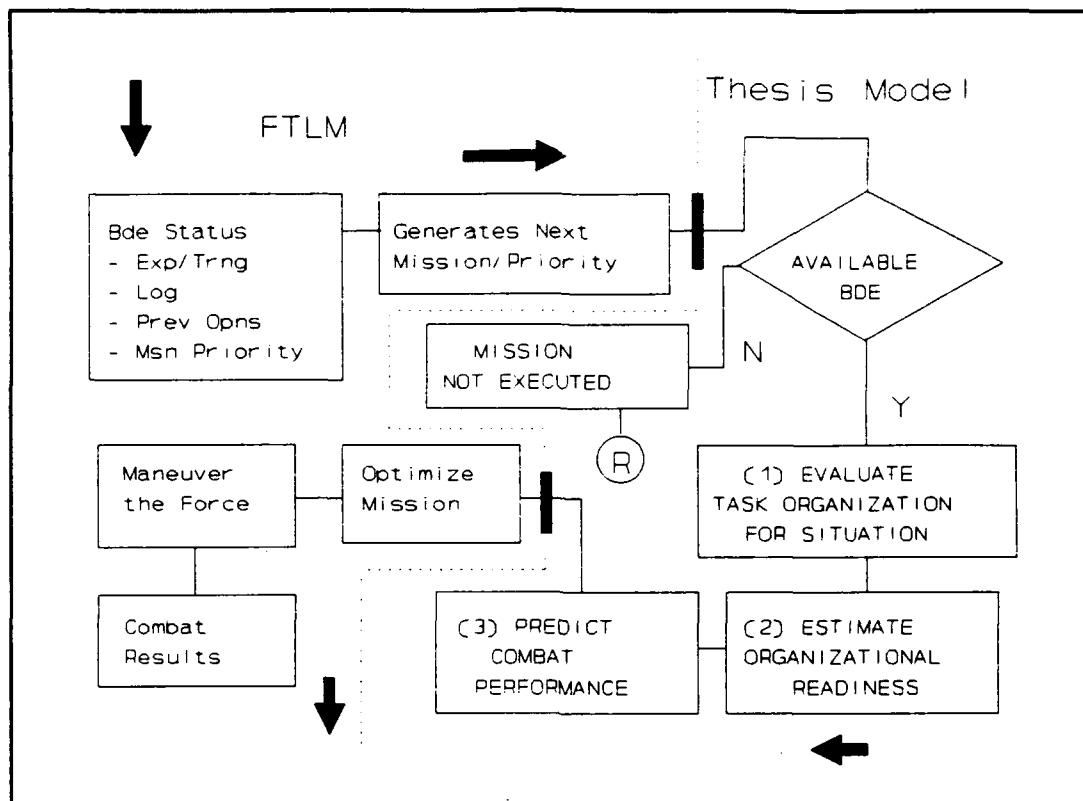


Figure 1-2. Proposed FTLM with Thesis Model

training level of the brigade. Two types of expert judgment were required to produce this estimate. In the first, the author, acting as an expert, generated "Behavior Curves" that give the relative utility associated with each level within a factor. For the second, junior field grade officers completed the Brigade Influence Factor Questionnaires to establish the relative importance of the factors towards mission success. A sample Brigade Influence Factor Questionnaire is located in Appendix B. Finally, the third phase combines the results of the first two in order to predict each brigade's combat performance. These phases are summarized in the section that follows and discussed in detail in Chapters IV, V and VI.

B. PHASE I - TASK ORGANIZATION EVALUATION

The first phase estimates each available brigade's effectiveness for the situation based solely upon the task organization of that brigade. This phase estimates the answer to the question: "How well is this brigade task organized for the mission?" The model possesses a data base of "ideal" task organizations for each situation. These "ideal" task organizations were obtained from surveyed faculty at the United States Army War College and represent expert professional judgment. Surveyed results are given in Appendix C for 180 of the 216 unique combinations of the following:

- Mission, (3) - Attack, Defend or Delay.
- Enemy Force Composition, (2) - Armor/Mechanized Infantry or Infantry, both considered to possess the former Soviet style organizations and equipment.
- Terrain Type, (3) - Urban (predominantly flat), Mountainous or Flat to Rolling.
- Visibility, (2) - Unlimited daylight or Night with three-quarter moon.
- Average Engagement Window, (3) - Three kilometers or greater, Three kilometers to One kilometer or less than One kilometer.
- Trafficability State, (2) - Supports vehicles or Restricts vehicles to roads due to vegetation, structures or terrain.

The first phase culminates in the comparison of each available brigade to the "ideal" task organization for the given situation, producing the "Task Organization Score" for each brigade. TABLE I displays a sample of the model's brigade task organization evaluation results. A larger score

Question : what is the range for score data

indicates a better task organized brigade for the given situation.

TABLE I					
"TASK ORGANIZATION EVALUATION SCORES"					
BRIGADES					
SITUATION NUMBER	I	II	III	IV	V
29	1.246	1.337	1.092	0.958	0.939
114	0.483	0.821	0.486	2.166	1.808

The model considered the same brigade task organizations to determine the above results. In this example, the model assigns Brigade I (an Armor/Mech Bde) the second highest score (1.246) when considered for the mission described in Situation 29; identified by experts as a mission better suited for an armor/mechanized brigade. However, the model also assigns Brigade I the lowest score (0.483) when considered for the mission described in Situation 114; identified by experts as a mission more suited for an infantry brigade.

C. PHASE II - ORGANIZATIONAL READINESS ESTIMATION

The second phase evaluates each considered brigade's ability to use its task organized units during combat or the brigade's organizational readiness. Organizational readiness is defined within the model as the ability of the brigade to

fully employ its task organized forces, given a specific logistics level, experience/training state, length of previous operation and amount of preparation time. The model predicts each brigade's behavior or organizational readiness based upon the combined influences of the following factors:

- PREPARATION TIME available to plan, rest, resupply, coordinate and rehearse the mission prior to execution.
- Availability of all LOGISTICS classes.
- Negative residual effects produced by the length of the preceding mission, identified as CONTINUOUS OPERATIONS.
- EXPERIENCE and TRAINING received by the brigade due to theater combat, training within the theater prior to combat and training prior to theater deployment.

Modeling the combined influence of these four factors requires decomposition of each factor into exclusive categories. The range of categories within each factor possessed both extremes of that factor's spectrum. The factors were broken down as follows:

- PREPARATION TIME (8 Increments)
 - 0 - 6 Hours
 - 6 - 12 Hours
 - 12 - 18 Hours
 - 18 - 24 Hours
 - 24 - 48 Hours
 - 48 - 72 Hours (3 Days)
 - 3 Days - 1 Week
 - 1 Week - 1 Month

● LOGISTICS (5 Levels)

- 100 to 90 Percent, Considered 95 Percent
- 90 to 80 Percent, Considered 85 Percent
- 80 to 70 Percent, Considered 75 Percent
- 70 to 60 Percent, Considered 65 Percent
- Less than 60 Percent

● CONTINUOUS OPERATIONS (7 Increments)

- Less than 12 Hours
- Greater than 12 and less than 18 Hours
- Greater than 18 and less than 24 Hours
- Greater than 24 and less than 36 Hours
- Greater than 36 and less than 48 Hours
- Greater than 48 and less than 72 Hours
- Greater than 72 Hours

● EXPERIENCE and TRAINING (4 Levels)

- "ROOKIE" Brigade - organization passing all minimum requirements as established by the US Army or the US Marine Corps for assignment to the theater. Does not possess combat experience and has not received training within the theater.
- "NEW" Brigade - organization considered the same as a "Rookie" brigade but has received a period of training within the theater prior to the commitment of this organization to combat.
- "WELL-Trained" Brigade - organization on active status prior to the theater conflict's start and deployed to the theater as part of the theater's contingency plans.
- "VETERAN" Brigade - organization possesses extensive training experiences concerning operations in theater and has conducted successful combat operations within theater.

Within each expert's range of judgment, the model assigns the highest organizational readiness value of one to a brigade that receives the maximum possible PREPARATION TIME (30 days), possesses the maximum possible LOGISTICS throughout the maximum possible PREPARATION TIME (100%), possesses the highest level of EXPERIENCE and TRAINING (Veteran), and any negative effects from the previous mission no longer exist. Similarly, the model assigns the lowest organizational readiness value of zero within each expert's range of judgment to a brigade that receives no PREPARATION TIME (Less than 6 Hours), possesses the minimum level of LOGISTICS (Less Than 60%), possesses the lowest level of EXPERIENCE and TRAINING (ROOKIE), and has just completed a mission that generates the need for a lengthy recovery period (CONTINUOUS OPERATIONS Greater Than 72 Hours). All other organizational readiness values are scaled between these two extremes for each expert's range of judgment. The second phase ends with each brigade possessing a range of scores between zero and one that represent that brigade's organizational readiness for each preparation time increment with the specific amount of logistics assigned by the wargame. TABLE II gives an example of the scores produced by the model at the conclusion of the second phase for five brigades. The first row of each time increment represents the increase in organizational readiness associated with the change in time alone. The second row of the time increment indicates the change due to both an

increase in time and an increase in logistics. In this case, an arbitrary logistics increase of ten percent for every twelve hours until the maximum logistics level is reached. Additionally, this example assumes each brigade continues to receive enough logistics to maintain the logistics level reached.

D. PHASE III - COMBAT PERFORMANCE PREDICTION

The third phase does not result in a single outcome. Rather, this phase produces a range of information that enables the theater wargame to optimize mission assignment for each situation. Based upon the product of each brigade's task organization evaluation and organizational readiness estimate, the model produces "Combat Performance Prediction Scores." The scores represent an expert's judgment of the suitability of the brigade's task organization for the situation given; varying preparation times; an arbitrarily predetermined logistics resupply rate at each of the preparation times; the experience and training status of the brigade; and the negative effects associated with the preceding operation. A larger score represents a greater ability to accomplish the mission. TABLE III provides an example of these results. The top of the table identifies each brigade's experience and training status (EXP/TRN), length of previous continuous operation (CONT) and logistic level (LOG) as maintained by the wargame. The ascending scores display the advantages

TABLE II
"ORGANIZATIONAL READINESS ESTIMATES"

PREPARATION TIME (Hours)	BRIGADES				
	I	II	III	IV	V
0 - 6	0.343	0.438	0.525	0.567	0.401
Log (+)	0.343	0.438	0.525	0.567	0.401
6 - 12	0.347	0.442	0.529	0.571	0.405
Log (+)	0.445	0.576	0.663	0.571	0.445
12 - 18	0.353	0.447	0.534	0.576	0.410
Log (+)	0.450	0.582	0.668	0.576	0.450
18 - 24	0.361	0.456	0.542	0.584	0.419
Log (+)	0.592	0.590	0.677	0.584	0.556
24 - 48	0.374	0.469	0.555	0.598	0.432
Log (+)	0.605	0.603	0.690	0.598	0.703
48 - 72	0.392	0.487	0.574	0.616	0.450
Log (+)	0.624	0.621	0.708	0.616	0.721
72 - Wk	0.424	0.518	0.605	0.647	0.482
Log (+)	0.655	0.653	0.740	0.647	0.753
Wk - Mo	0.769	0.627	0.701	0.722	0.564
Log (+)	1.000	0.761	0.835	0.722	0.835

associated with both additional preparation time and increased logistics at that time. The first row of each time increment lists the brigade's score for the increase in preparation time alone. The second row of each time increment lists the brigade's score for a combination of an increased preparation time with the arbitrary logistics level increase of ten percent per brigade for every 12 hours. The range of scores possible within the model has a minimum inclusive bound of

zero and no maximum upper bound. In this example, the model predicts Brigade II as the best choice for the mission should the wargame require mission execution during the first week assuming all brigades maintain their logistics levels. If the model had been forced to choose between Brigades I and IV, the influence generated by a logistics increase becomes noticeable. The model predicts Brigade IV (0.543) at six hours, but Brigade I (0.554) at twelve hours after Brigade I receives the additional logistics. Additionally, should the wargame elect to provide a full month of preparation time for this mission, the model predicts Brigade I as the best choice for the mission described by this situation. The scores need not always increase with a change of logistics.

Should the wargame predict a brigade would not be able to receive enough supplies to maintain its initial level, then the value of logistics could decrease appropriately.

Upon conclusion of this final phase, the mission optimization subroutine within the theater wargame would use this information combined with the evaluation of maneuver requirements to select the best brigade for the mission.

TABLE III
"COMBAT PERFORMANCE PREDICTION SCORES"

BRIGADES

	I	II	III	IV	V
EXP/TRN	Vet	New	Well	Rookie	Well
CONT OPS	+72	24/36	18/24	<12	12/18
LOG	75%	85%	85%	95%	65%
6 Hrs	0.428	0.586	0.573	0.543	0.377
Log Efct	0.428	0.586	0.573	0.543	0.377
12 Hrs	0.433	0.591	0.578	0.547	0.381
Log Efct	0.554	0.771	0.724	0.547	0.418
18 Hrs	0.439	0.598	0.583	0.552	0.385
Log Efct	0.561	0.777	0.730	0.552	0.422
24 Hrs	0.450	0.609	0.592	0.560	0.393
Log Efct	0.738	0.789	0.739	0.560	0.522
48 Hrs	0.466	0.627	0.607	0.572	0.405
Log Efct	0.754	0.806	0.753	0.572	0.660
72 Hrs	0.489	0.651	0.626	0.590	0.423
Log Efct	0.777	0.830	0.773	0.590	0.677
Week	0.528	0.693	0.661	0.620	0.452
Log Efct	0.817	0.873	0.808	0.620	0.707
Month	0.959	0.839	0.765	0.692	0.530
Log Efct	1.246	1.018	0.912	0.692	0.784

III. SURVEYS

A. TASK ORGANIZATION SURVEYS

1. Survey Participants

Surveys from 36 United States Army War College faculty produced the "ideal" task organization for 180 of the 216 possible situations the model can evaluate. The 36 situations that did not receive evaluation remain blank and are included at the end of Appendix C for completeness only. Both Army and Marine field grade officers (colonel, lieutenant colonel or major) completed the surveys. The table on the next page displays the task organization survey participant summary data. The "Billet" column indicates the positions the survey participants filled and the "Total Months" column identifies the cumulative length of time the billets were held. This table indicates that the 36 faculty members completing task organization surveys possessed over 38 years worth of brigade level operations or higher and over 112 years worth of battalion level operations or higher experience.

Billet	Total Months
<u>Corps or Higher</u>	
G2 Army or Corps	72
<u>Division</u>	
G3/G4 or Chief of Staff	129
<u>Brigade</u>	
Brigade Commander	104
Brigade Executive Officer	98
Brigade Operations Officer	55
<u>Battalion/Squadron</u>	
Commander	489
Executive Officer	188
Operations Officer	209

All combat arms branches within the army were represented within the survey with the exception of the engineer branch. One Marine field grade officer from an aviation community also completed the survey. The table below lists the specific numbers from each branch.

Branch	Quantity
Armor	7
Infantry	9
Artillery	4
Intelligence	1
Engineer	0
Air Defense	4
Signal	4
Other/Did not Indicate	6

2. Survey Organization and Administration

The six conditions used to describe each situation are delineated as follows:

- I MISSION
 - (1) Attack
 - (2) Defend
 - (3) Delay

- II THREAT FORMATION
 - (1) Mechanized Infantry/Armor
 - (2) Infantry

- III TERRAIN
 - (1) Urban
 - (2) Mountainous
 - (3) Flat to Rolling

- IV VISIBILITY
 - (1) Unlimited
 - (2) Reduced

- V AVERAGE ENGAGEMENT WINDOW
 - (1) 3 km or Greater
 - (2) 1 km to 3 km
 - (3) Less than 1 km

- VI TRAFFICABILITY
 - (1) Supports Vehicle Movement
 - (2) Restricts Vehicle Movement

The first six digits of the "Situation Number" listed at the top of each survey represents the unique combination of these six factors and the following three digits designate the order of the situation out of 216.

The surveys were organized into eighteen unique packets. Each packet contained twelve of the 216 situations selected at random. The situations were randomized by using APL (A Programming Language). The vector produced by the command "roll 216" produced the sequence for placing the twelve situations in each of the 18 packets required for the complete survey. A sample packet can be found in Appendix A.

Eighteen packets comprised a full set. Two complete sets of questionnaires as well as additional number "18" packets were submitted to the War College.

Each participating faculty member received one questionnaire packet from Dr. Glenda Y. Nogami, the point of contact at the Army War College. The survey directed participants to complete ten relative scale, pairwise comparison questions for each of the twelve unique situations within the packet. The questions associated with each situation asked the participant to evaluate the degree of contribution one combat arms organization makes towards brigade mission success as compared to another combat arms organization in the given situation. Only five types of combat arms organizations were evaluated. The combat arms organizations include

- Armor Battalion (M1A1 equipped)
- Mechanized Infantry Battalion (M2 equipped)
- Infantry Battalion
- Artillery Battalion (towed or self-propelled as appropriate for either an armor/mechanized or infantry brigade)
- Engineer Company (fully capable to perform mobility, counter-mobility or survivability missions as appropriate for either an armor/mechanized or infantry brigade)

B. ORGANIZATIONAL READINESS OR BEHAVIOR FACTOR SURVEYS

Army majors and captains selected for promotion to major and Marine majors with combat arms military occupational specialties, all attending the Operations Research curriculum at the Naval Postgraduate School, produced the influence factor weights used for the model's organizational readiness estimate.

All participating students received the same questionnaire to evaluate the importance of four factors identified as influencing brigade organizational readiness or behavior. The questionnaire directed survey participants to complete twenty-four relative scale, pairwise comparisons to determine the importance of each factor's influence upon a brigade's operational readiness. The four influence factors considered were

- EXPERIENCE/TRAINING
- LOGISTICS
- CONTINUOUS OPERATIONS (recovery from previous operation)
- PREPARATION TIME

A sample questionnaire is given in Appendix B. Five participants completed and returned the questionnaire. Their results are in Appendix D.

IV. TASK ORGANIZATION EVALUATION

Documentation identifying optimum brigade task organizations for combat given specific situations does not exist, though numerous references address military planning from squad to corps. Additionally, no documentation exists to help determine the combined effects of the four influence factors upon brigade organizational readiness or behavior.

To overcome these shortcomings, it was decided that the best way to estimate the "ideal" task organization for a situation as well as the combined influence of selected factors upon brigade behavior was through expert military judgment. The Analytic Hierarchy Process (AHP) was selected to model these judgments. AHP only requires experts to make pairwise comparisons, and this need can easily be fulfilled by questionnaires.

A. THE ANALYTIC HIERARCHY PROCESS

The Analytic Hierarchy Process elicits pairwise comparisons from judges using an integer scale from 1 to 9. Judges indicate their preference for one item over another by selecting the integer value that most closely represents their judgment [Ref 4:p. 23]. Figure 4-1 displays the meaning of the integer values.

SCALE	
Degree of Contribution (Questionnaire 1)	
Degree of Influence (Questionnaire 2)	
<u>Integer</u>	<u>Definition</u>
1	Equal
3	Somewhat Greater
5	Moderate
7	Large
9	Vast
2,4,6,8	Judgements used for greater accuracy

Figure 4-1. AHP Scale

AHP assumes the preference of a judge for one item over another generates the reciprocal result when the comparison is reversed. An example: Judge prefers an armor battalion over an infantry battalion by value of 4, AHP assumes the same judge prefers an infantry battalion over an armor battalion by a value of 1/4. This assumption requires only $[(n-1)n]/2$ pairwise comparisons, where "n" represents the number of items compared. Figure 4-2 displays an example of the Comparison Matrix (CM) generated for each judge in every situation evaluated by the model's first phase. The "Qn" values identify the locations within the matrix of the judge's entries, where "n" indicates the question number on the survey. The "1/Qn" values correspond to cross-diagonal matrix entries required by AHP. The single vector on the right of

the matrix represents the principal eigenvector (EV) obtained by computing the geometric mean of each row. [Ref 5:pp. 17-21]

	ARM	ARTY	ENG	MECH	INF	EV
ARM	1	Q9	Q1	Q4	Q7	e1
ARTY	1/Q9	1	Q2	Q8	Q6	e2
ENG	1/Q1	1/Q2	1	Q5	Q3	e3
MECH	1/Q4	1/Q8	1/Q5	1	Q10	e4
INF	1/Q7	1/Q6	1/Q3	1/Q10	1	e5

Figure 4-2. Comparison Matrix (CM)

This eigenvector is then normalized. The elements of the normalized eigenvector represent the percent of effectiveness that judge associates with each organization for the given situation. [Ref 5:p. 19]

The same process was performed on the results obtained from each judge for the second questionnaire to determine each factor's importance with respect to brigade organizational readiness. The results of the second questionnaire's computations are in Appendix D.

B. QUESTIONNAIRE RESULTS

The Analytic Hierarchy Process also possesses the ability to estimate the consistency or "focus" of the expert's

opinion. This characteristic can be considered an "intensity measurement" of the actual preference [Ref 5:pp. 179-190]. In the task organization's survey case, for example, this capability helps determine if the judge "really" knows what task organization he wants for the given situation. This intensity measurement is estimated by determining a consistency ratio (CR) for each individual survey. Perfect consistency within a survey results in a consistency ratio score of 0. An example of perfect consistency would be: Judge prefers A over B by two, B over C by two and A over C by four. The consistency ratio computations are best illustrated by example. The next three figures demonstrate the calculations required to determine the consistency ratio of a single survey. Figure 4-3 displays an example of the comparison matrix generated by Situation Number 29 for Survey Participant Number 2.

SITUATION NUMBER 29 SURVEY NUMBER 2					
COMPARISON MATRIX (CM)					
	Armor	Arty	Eng	Mech	Inf
Armor	1.000	3.000	7.000	1.000	5.000
Artillery	0.333	1.000	7.000	1.000	3.000
Engineer	0.143	0.143	1.000	0.142	0.142
Mech	1.000	1.000	7.042	1.000	5.000
Infantry	0.200	0.333	7.042	0.200	1.000

Figure 4-3.

Small variations from integer values occur in the matrix since the exact reciprocal of all integers between one and nine can

not be represented with only three decimal place accuracy. Figure 4-4 displays the principal eigenvector (EV) and normalized eigenvector (NV).

SITUATION NUMBER 29 SURVEY NUMBER 2		
	EIGENVECTOR (EV)	NORMALIZED (NV)
Arm Bn	2.537	0.368
Arty Bn	1.476	0.214
Eng Co	0.210	0.031
Mech Bn	2.039	0.296
Inf Bn	0.623	0.091

Figure 4-4.

Figure 4-5 displays the results of the three calculations required to determine the matrix's consistency ratio. First, the principal eigenvalue for the matrix is calculated. This is found by multiplying the comparison matrix by the normalized eigenvector and then dividing each element of the resulting vector by the corresponding element of the normalized eigenvector. This vector is then summed and divided by the order of matrix, in this case 5, to produce the matrix's eigenvalue. For this example, the eigenvalue is 5.391. The closer the eigenvalue to the order of the matrix, the greater the consistency of the questionnaire's comparisons. [Ref 5:pp. 180-184]

In the perfect consistency case for an order 5 matrix, the eigenvalue equals 5. The second calculation determines the *consistency index* (CI) of the matrix. This index represents

the deviation from consistency of the matrix. The consistency index for the matrix is defined by

$$(\lambda_{\max} - n) / (n - 1) \quad (4.1)$$

where

$\lambda_{\max}$ = the principle eigenvalue
 n = order

Note that for perfect consistency this index equals zero.

[Ref 5:p. 181]

SITUATION NUMBER 29		SURVEY NUMBER 2	
CM x NV			
1.974	/	0.368	= 5.358
1.119	/	0.214	= 5.218
0.169	/	0.031	= 5.522
1.547	/	0.296	= 5.223
0.510	/	0.091	= 5.635
Eigenvalue		5.391	
Consistency Index		0.098	
Random Index		1.120	
Consistency Ratio		0.087	

Figure 4-5.

The random index (RI) of 1.12 represents the mean consistency index of 500 randomly generated positive reciprocal matrices of order 5. The Random Index permits a comparison between the specific consistency index produced from the Comparison Matrix and a randomly generated matrix of the same order. The ratio of the consistency index to the random index is the third required calculation and produces the consistency ratio for the matrix of comparisons. In this case, the CR of 0.087 represents a value less than the recommend 0.1 value and

indicates a fairly high degree of consistency or certainty of the judge's opinion. Based upon empirical results, SAATY recommends experts review survey results with a CR greater than 0.1, not for changing the expert's estimates to make the survey more consistent, but because he believes the expert most likely achieved a better understanding of the situation and refined his concept of the solution during the survey process, thus developing some inconsistency throughout his judgments. The greater the expert's certainty, the smaller the survey's consistency ratio. [Ref 5:p. 21]

Unfortunately, a very good consistency ratio for this matrix does not mean the answer provided by the judge is correct, just that the judge had a clear grasp of what task organization he thought best suited the situation. Values in excess of 0.1 and less than 0.3 do not indicate poor survey results, only that the intensity of the preference could be stronger. However, it is recommended that for the purposes of the survey that all surveys possessing consistency ratios of less than 0.3 be considered valid for two reasons. First, the opportunity for participants to review their results in order to refine their "focus" did not exist during the survey process. Second, the combinations of conditions produce some rather unusual situations. An example: A combination of a three kilometer or greater engagement window within an urban setting is hard to picture. Figure 4-6 displays the consistency ratios of all 402 returned surveys. consistency

ratios greater than 0.3 identify a noticeable degree of uncertainty in the judge's estimate of the situation. These high consistency ratios indicate that experts possessed only a rough concept of the "ideal" task organization necessary given the specific situation. Forty-five surveys possessed a consistency ratio greater than 0.3. Surveys possessing a consistency ratio greater than 0.3 should not be considered for use within the Future Theater Level Model. The results of these "uncertain" surveys are included in Appendix C for completeness in situations with less than twelve results.

C. EVALUATION PROCESS

1. Evaluation Computations

Given the theater simulation identifies the situation, task organization evaluation requires three steps. First, randomly select one of the normalized vectors produced by the task organization survey for the identified situation. This step represents an individual expert's judgment of the type of task organization he would construct given the opportunity. Second, using this selected vector as the "ideal," compute the score for each unit type within the brigade. This is found by multiplying each unit type's quantity by its percentage listed in the selected vector. This second step captures first order effects only. The model assumes the value of an additional unit of the same type is exactly equal to the value

CONSISTENCY RATIO HISTOGRAM (402 Cases)

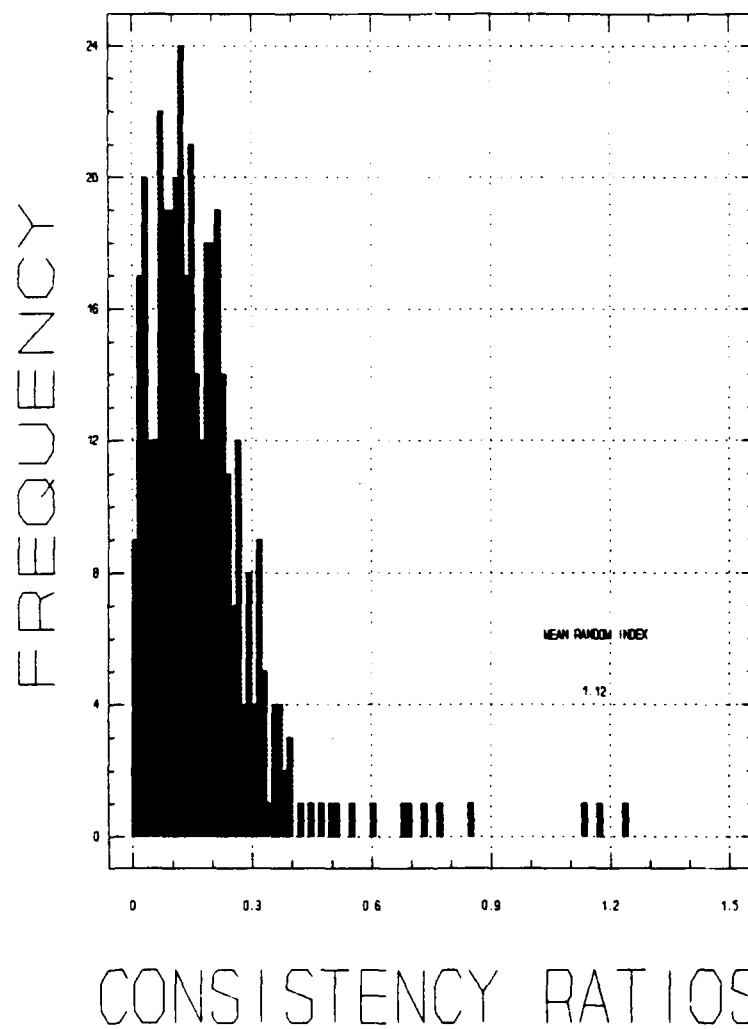


Figure 4-6. Consistency Ratio Histogram

of the first unit of that type. The third step requires only the summation of each brigade's unit type results to produce the "Brigade Task Organization Score."

2. Evaluation Example

TABLE IV lists the task organizations for the five brigades used as examples in Chapter II. The first four brigades represent routine task organizations and Brigade V has been included to demonstrate the fidelity of the model.

TABLE IV					
BRIGADE TASK ORGANIZATIONS					
Unit Types	Brigades				
	I	II	III	IV	V
Armor Bn	2	2	1	0	1
Mech Inf Bn	1	1	2	0	0
Infantry Bn	0	0	0	3	3
Artillery Bn	1	1	1	2	1
Eng Co	0	1	0	3	2

An example evaluation for Situation 29 is performed in Figure 4-7 on the brigades listed in TABLE IV to demonstrate this phase of the model. Appendix C possesses each situation's unique combination of conditions. The Normalized Vector (NV) from Situation 29 Survey Number 2 was randomly selected for this example. Figure 4-7 illustrates the three calculations required for the model's task organization evaluation. The larger the score, the better organized the brigade for the situation. Figure 4-8 lists the "Task Organization Scores"

obtained from Situation 29 Survey Number 2 and Situation 114 Survey Number 3. The scores for Situation 29 Survey Number 2 (first row) indicate an expert believes this situation calls for the employment of a mechanized or armored brigade, while the scores for Situation 114 Survey Number 3 (second row) indicate an expert believes an infantry brigade is more suited for this situation.

BRIGADE I			
Unit Type	Qty	NV	Results
Armor Bn	2	0.368	0.736
Mech Inf Bn	1	0.214	0.214
Inf Bn	0	0.031	0
Artillery Bn	1	0.296	0.296
Eng Co	0	0.091	0
		SCORE	<u>1.246</u>

BRIGADE II			
Unit Type	Qty	NV	Results
Armor Bn	2	0.368	0.736
Mech Inf Bn	1	0.214	0.214
Inf Bn	0	0.031	0
Artillery Bn	1	0.296	0.296
Eng Co	1	0.091	0.091
		SCORE	<u>1.337</u>

BRIGADE III			
Unit Type	Qty	NV	Results
Armor Bn	1	0.368	0.368
Mech Inf Bn	2	0.214	0.428
Inf Bn	0	0.031	0
Artillery Bn	1	0.296	0.296
Eng Co	0	0.091	0
		SCORE	<u>1.092</u>

BRIGADE IV			
Unit Type	Qty	NV	Results
Armor Bn	0	0.368	0
Mech Inf Bn	0	0.214	0
Inf Bn	3	0.031	0.093
Artillery Bn	2	0.296	0.592
Eng Co	3	0.091	0.273
		SCORE	<u>0.958</u>

BRIGADE V			
Unit Type	Qty	NV	Results
Armor Bn	1	0.368	0.368
Mech Inf Bn	0	0.214	0
Inf Bn	3	0.031	0.093
Artillery Bn	1	0.296	0.296
Eng Co	2	0.091	0.182
		SCORE	<u>0.939</u>

Figure 4-7. Evaluation Computations

<i>"Task Organization Scores"</i>					
	I	II	BRIGADES III	IV	V
Situation 29/2	1.246	1.337	1.092	0.958	0.939
Situation 114/3	0.483	0.821	0.846	2.166	1.808

Figure 4-8. Evaluation Comparisons

The difference between scores indicates how much better one brigade is task organized for the situation than the other.

V. ORGANIZATIONAL READINESS ESTIMATION

The interaction between the four factors influencing brigade organizational readiness can be viewed as a network to determine the influence between factors as well as to estimate the relative importance between those influences. Figure 5-1 displays the network representation.

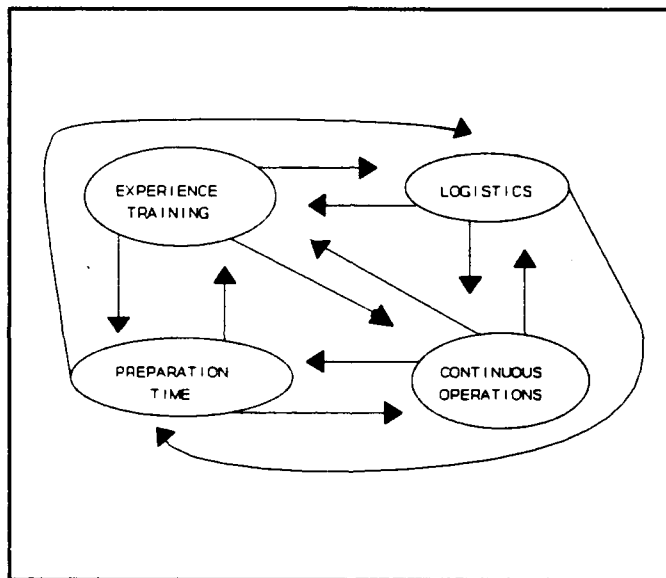


Figure 5-1.

Interactions of this type can be viewed as a "system with feedback" [Ref 5:p. 205]. Since the model assumes all factors influence each other, Figure 5-1 displays a complete graph [Ref 6:p. 422]. This complete graph represents a brigade's "Behavior System" with the nodes identifying the influence factors and the directed arcs representing the influence of one factor upon the other. Figure 5-2 displays an example of

the types of interactions within the "Behavior System." The logistics factor's spectrum is portrayed between the two levels indicated along the "X" axis. The "Y" axis represents the magnitude of influence the factor LOGISTICS imparts upon the organizations identified by the two curves. In this example, as the amount of logistics increases, the influence of logistics upon both the "ROOKIE" and the "VETERAN" organizations increase as well. However, the slope of the "ROOKIE" organization's curve is generally steeper. This indicates that for the same amount of logistics increase, the "ROOKIE" organization receives greater influence. The figure also shows that given the same amount of logistics, the "VETERAN" organization always receives more influence from logistics than the "ROOKIE" organization.

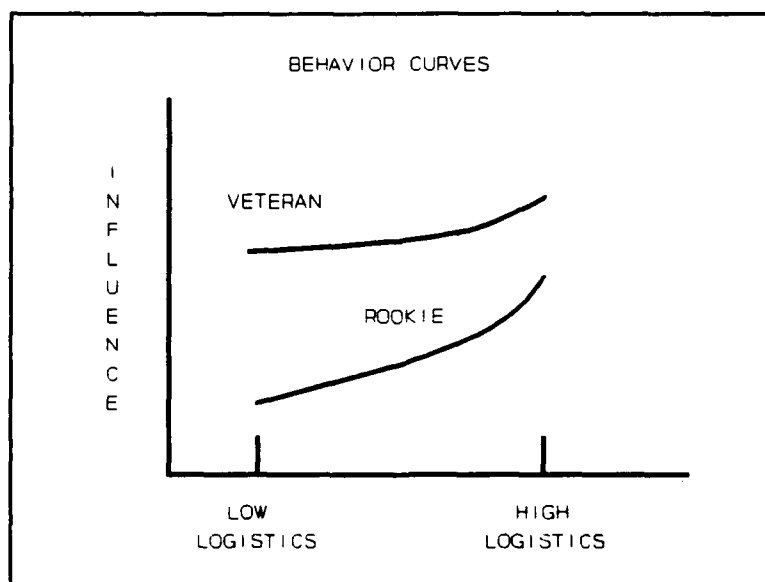


Figure 5-2. Influence Interaction

An influence increase does not always indicate a positive effect. In the continuous operations case, an increase in the length of the previous mission will require an increase in preparation time to overcome the negative effects associated with the previous operation.

Producing a score that accounts for the interaction of these nonlinear relationships requires a three step process. The first step (performed by the author) estimates the amount of influence one factor has upon the levels of the other factors and forms the shape of the behavior curves. The second step (with the aid of a second survey) captures the importance of those influences. The third step combines the results of the first two and produces for each judge the influence factor level's value within the "Behavior System." The generation of a value for each influence factor's level that accounts for the influence of all interactions, permits a scaled linear combination of these levels to estimate a brigade's organizational readiness.

A. INFLUENCE COMPARISONS - STEP ONE

Each factor's influence is compared against all levels of the other factors. The Comparison Matrix of Figure 5-3 displays the results produced by comparing the influence of the factor LOGISTICS with the first level of the factor PREPARATION TIME (0-6 Hours). The entries in this matrix were determined in the same manner as the task organization

surveys, with the exception that logistics levels were substituted for the organizations and the amount of preparation time replaces the six conditions comprising

LOGISTICS Influence on Level 1 PREPARATION TIME						
(Log Level vs Log Level)						
	100- 90	<90- 80	<80- 70	<70- 60	<60	EV
100- 90	1	4	6	9	9	4.547
<90- 80	0.250	1	4	7	9	2.290
<80- 70	0.167	0.250	1	4	8	1.059
<70- 60	0.111	0.143	0.250	1	6	0.474
<60	0.111	0.111	0.125	0.167	1	0.191

Figure 5-3. Example Influence Comparison Matrix

the situation. For example: Using the scale described in Chapter IV, the " X_{12} " entry of "4" was the result of comparing the influence of a "100-90%" logistics level to the influence of "<90-80%" logistics level, given only "0-6" hours of preparation time. Whether the influence is considered good or bad is not important, only the magnitude of the influences were captured with these comparisons. The author acting as an expert, performed 1115 comparisons to estimate the interaction of all influence combinations.

B. INFLUENCE IMPORTANCE - STEP TWO

The first step in this process did not account for the importance of the captured influences. Since the relationship between the factors of this "Behavior System" are considered nonlinear by most experts, a single level change of one factor may require a multilevel change of another to produce the same net effect upon the brigade's organizational readiness. For example: Keeping the other factors constant, an expert may view a brigade that has lost its "VETERAN" experience/training status and receives the "WELL-trained" designation as requiring 48 hours of preparation time to generate the same organizational readiness level that the original "VETERAN" brigade could generate in 18 hours.

A "Supermatrix" serves as the framework for evaluating both the influence of the four factors and the importance of those influences within the "Behavior System" [Ref 5:p. 207]. Figure 5-4 displays the structure of this model's supermatrix. The " F_m " entries correspond to the four factors: " F_1 " PREPARATION TIME; " F_2 " LOGISTICS; " F_3 " CONTINUOUS OPERATIONS; and " F_4 " EXPERIENCE/TRAINING. The " l_{mn} " marginal entries identify the discrete levels of the four factors. The results of the normalized eigenvectors produced during the first step of this process form the column entries within the " W_{mn} " blocks of the supermatrix [Ref 5:p. 207]. For example, the eigenvector produced by the Comparison Matrix of Section A

became the first column entry of the " W_{21} " block after normalization. Each block possesses a number of columns equal to the discrete levels within the column factor and the number of rows corresponding to the number of discrete levels within the row factor. When all comparisons required of the first step are complete, all blocks within the supermatrix are column stochastic (each column sums to one) with the " W_{mm} " blocks forming identity matrices. Appendix E contains the supermatrix produced by the author.

		F_1	F_2	F_3	F_4
		11 18 21 25 31 37 41 44			
F_1	11	W_{11}	W_{12}	W_{13}	W_{14}
	18				
F_2	21	W_{21}	W_{22}	W_{23}	W_{24}
	25				
F_3	31	W_{31}	W_{32}	W_{33}	W_{34}
	37				
F_4	41	W_{41}	W_{42}	W_{43}	W_{44}
	44				

Figure 5-4. Model "Supermatrix"

The second survey captured the expert's opinion of the importance of each factor's influence. For our purposes, this

means the importance of the influence of each factor upon the blocks in its row. Figure 5-5 portrays an example of the "importance" relationships captured by the Brigade Influence Factor Survey for the factor LOGISTICS. The results for of each survey produce a unique weighting scheme for the blocks of the supermatrix. The column stochastic matrix formed by the results of the second survey participant appear below.

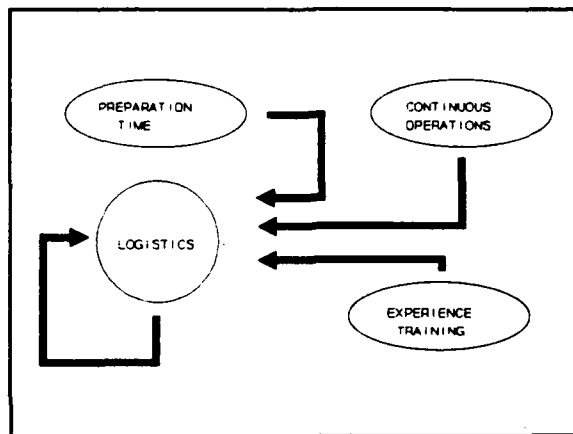


Figure 5-5. Logistics Example

The columns represent the specific value or "weight" of importance each column factor receives from the row factors within the "Behavior System." All surveys possessed consistency ratios of less than 0.3 for each factor.

Combining these results with Figure 5-5 would place 0.064 on the arc from PREPARATION TIME to LOGISTICS, 0.647 on the LOGISTICS self-loop, 0.108 on the arc from CONTINUOUS OPERATIONS to LOGISTICS and 0.181 on the arc from EXPERIENCE/TRAINING to LOGISTICS. This means that in this judge's view the possession of logistics (0.647) carries a

TABLE V				
	INFLUENCE FACTOR SURVEY PARTICIPANT 2			
	PREP	LOG	CONT	EXP/TRN
PREP	.655	.064	.065	.121
LOG	.154	.647	.154	.155
CONT	.070	.108	.652	.070
EXP/TRN	.121	.181	.129	.655
Consistency Ratios	.080	.068	.114	.012

EXPERIENCE/TRAINING's influence upon LOGISTICS is almost three times the influence provided by the factor PREPARATION TIME (0.181/0.064).

C. FACTOR LEVEL VALUES - STEP THREE

Each " W_{mn} " block of the supermatrix is then multiplied by the corresponding "mn" element of the matrix produced by the survey results. This forms a column stochastic supermatrix which is then raised to a very high power to estimate the "steady state" influence values. This is the same process used to determine steady state transition probabilities for a discrete time Markov Chain [Ref 7:pp. 135-140]. The elements of the resulting column vectors represent the estimated value of each factor's level within the "Behavior System." Appendix F contains the final results for each of the five surveys and the author's pilot case.

D. ORGANIZATIONAL READINESS ESTIMATION PROCESS

1. Estimate Computations

The model computes the status of each brigade's organizational readiness as a scaled value of the following linear combination.

$$PREP_u + LOG_v - CONT OPS_w + EXP/TRN_x \quad (5.1)$$

The subscripts "u," "v," "w" and "x" represent the discrete level of each factor at which the brigade exists or is predicted to obtain at some future time. Since the effects of continuous operations are considered negative, the CONTINUOUS OPERATIONS influence is subtracted. Organizational readiness computations are scaled between maximum PREPARATION TIME plus maximum LOGISTICS plus maximum EXPERIENCE and TRAINING with no effect from CONTINUOUS OPERATIONS (Best Case) and minimum PREPARATION TIME plus minimum LOGISTICS plus minimum EXPERIENCE and TRAINING minus maximum CONTINUOUS OPERATIONS (Worst Case) for each judge. This scales the results to produce a score between zero and one for all organizational readiness computations. The best and worst case organizational readiness values are computed as follows:

BEST CASE

$$PREP_{MAX} + LOG_{MAX} + EXP/TRN_{MAX} \quad (5.2)$$

In this case $0.055 + 0.120 + 0.141 = 0.316$

WORST CASE

$$PREP_{MIN} + LOG_{MIN} - CONT OPS_{MAX} + EXP/TRN_{MIN} \quad (5.3)$$

In this case $0.006 + 0.008 + 0.035 - 0.113 = -0.064$

Let "X" equal the initial value obtained from Equation 1 for each brigade. Finally, insert "X" into Equation 5.4,

$$(X - Worst Case) / (Best Case - Worst Case) \quad (5.4)$$

The results from Equation 5.4 produce the "Organizational Readiness Estimate" for each brigade.

2. Estimate Example

TABLE VI displays the unique factor level values determined by the model using the fifth expert's influence factor weights.

TABLE VI			
FACTOR LEVEL - VALUES (Sample 5)			
Factor Level -	Value	Factor Level -	Value
PREPARATION TIME		LOGISTICS	
Hours	<u>Value</u>	Percent	<u>Value</u>
0-6	0.006	100-90	0.120
>6-12	0.008	<90-80	0.069
>12-18	0.010	<80-70	0.032
>18-24	0.013	<70-60	0.017
>24-48	0.018	<60	0.008
>48-72	0.025		
>72-168	0.037		
>168-720	0.055		
CONTINUOUS OPERATIONS		EXPERIENCE/TRAINING	
Hours	<u>Value</u>	Status	<u>Value</u>
0-12	0.010	ROOKIE	0.035
>12-18	0.013	NEW	0.050
>18-24	0.018	WELL	0.078
>24-36	0.023	VETERAN	0.141
>36-48	0.038		
>48-72	0.063		
>72	0.113		

TABLE VII identifies the specific level of each organizational readiness factor for the five example brigades exclusive of the factor PREPARATION TIME. The model assumes the factors CONTINUOUS OPERATIONS and EXPERIENCE/TRAINING do not change during the computation of the estimate. The factor LOGISTICS may change based upon the frequency of logistics resupply established by the theater simulation.

TABLE VII					
BRIGADE ORGANIZATIONAL READINESS FACTOR LEVELS					
Brigades					
	I	II	III	IV	V
TRN/EXP	VETERAN	NEW	WELL	ROOKIE	WELL
CONT	>72	>24-36	>18-24	0-12	>12-18
LOG	<80-70	<90-80	<90-80	100-90	<70-60

This example will assume a ten percent logistics increase for each brigade every twelve hours until the brigade reaches the highest logistics level. The example also assumes each brigade continues to receive supplies to maintain its logistics level. Figure 5-6 displays the first two preparation time increment results for the five brigades with and without the influence of a logistics level increase.

	Brigades				
	I	II	III	IV	V
EXP/TRN	VETERAN	NEW	WELL	ROOKIE	WELL
CONT	>72	>24-36	>18-24	0-12	>12-18
LOG	<80-70	<90-80	<90-80	100-90	<70-60
Factor Level Values					
EXP/TRN	+0.141	+0.050	+0.078	+0.035	+0.078
CONT	-0.113	-0.023	-0.018	-0.010	-0.013
LOG	+0.032	+0.069	+0.069	+0.120	+0.017
Total	0.060	0.096	0.129	0.145	0.082
PREP					
LOG					
0-6 Hours					
(0.006)	0.066	0.102	0.135	0.151	0.088
Log (+)	0	0	0	0	0
Subtotals	0.066	0.102	0.135	0.151	0.088
0-6 Hours					
SCALED	<u>0.343</u>	<u>0.438</u>	<u>0.525</u>	<u>0.567</u>	<u>0.401</u>
>6-12 Hours					
(0.008)	0.068	0.104	0.137	0.153	0.090
Log (+)	0.037	0.051	0.051	0	0.015
Subtotals	0.105	0.155	0.188	0.153	0.105
6-12 Hours Preparation Time.					
SCALED	<u>0.347</u>	<u>0.442</u>	<u>0.529</u>	<u>0.571</u>	<u>0.405</u>
6-12 Hours Preparation Time with Logistics increase.					
SCALED	<u>0.445</u>	<u>0.576</u>	<u>0.663</u>	<u>0.571</u>	<u>0.445</u>

Figure 5-6.

The underlined "SCALED" values are the "Organizational Readiness Estimates" for each brigade given the combination of preparation time increment and logistic level.

VI. COMBAT PERFORMANCE PREDICTION

A. COMBAT PERFORMANCE PREDICTION CALCULATIONS

The model predicts a brigade's combat performance by combining the results of the first phase with the second. Specifically, the model multiplies the brigade's "Task Organization Evaluation" by its corresponding "Organizational Readiness Estimate." In military decision-making terms [Ref 3], this result represents an expert analysis of the following:

- Mission Receipt and Analysis.
- Commander's Planning Guidance.
- Staff Estimates.
- Commander's Estimate and Concept.
- Preparation of Plans and Orders.

The approval and issuance of plans and orders (the remaining decision-making actions) occur within the theater wargame as the mission optimization process. The mission optimization process determines the final mission assignment based upon maneuver constraints and the results of this model.

Equation 5.5 represents the general form of this phase of the model's calculation, where "i" indicates the brigade evaluated:

$$\begin{aligned} & \text{TASK ORGANIZATION EVALUATION}_i \times \\ & \text{ORGANIZATIONAL READINESS ESTIMATE}_i = \\ & \text{COMBAT PERFORMANCE PREDICTION}_i \\ & (5.5) \end{aligned}$$

B. COMBAT PERFORMANCE PREDICTION EXAMPLE

Figure 6-1 displays the "Combat Performance Prediction" results for the five example brigades. The larger the value, the greater the likelihood of mission success. Like the previous examples, this example makes the same logistic resupply assumptions. These results illustrate the positive effect of receiving increasing amounts of preparation time and logistics combined with the advantage of a properly task organized and experienced unit for the situation.

SITUATION 29

	Brigades				
	I	II	III	IV	V
EXP/TRN	VETERAN	NEW	WELL	ROOKIE	WELL
CONT	>72	>24-36	>18-24	0-12	>12-18
LOG	<80-70	100-90	<90-80	100-90	<70-60
<i>"Task Organization Scores"</i>					
(Survey 2)	1.246	1.337	1.092	0.958	0.939
<i>"Organizational Readiness Estimates"</i>					
(Survey 5)					
0-6 Hours, no Logistics increases available.					
	0.343	0.438	0.525	0.567	0.401
6-12 Hours with Preparation Time increases only.					
	0.347	0.442	0.529	0.571	0.405
6-12 Hours with Preparation Time and Logistics increases.					
	0.445	0.576	0.663	0.571	0.445
.					
.					
Wk-Mo with Preparation Time increases only.					
	0.769	0.627	0.701	0.722	0.564
Wk-Mo with Preparation Time and Logistics increases.					
	1.000	0.761	0.835	0.722	0.835
<i>"Combat Performance Prediction Scores"</i>					
0-6 Hours, no Logistics increases available.					
	0.428	0.586	0.573	0.543	0.377
6-12 Hours with Preparation Time increases only.					
	0.433	0.591	0.578	0.547	0.381
6-12 Hours with Preparation Time and Logistics increases.					
	0.554	0.771	0.724	0.547	0.418
.					
.					
Wk-Mo with Preparation Time increases only.					
	0.959	0.839	0.765	0.692	0.530
Wk-Mo with Preparation Time and Logistics increases.					
	1.246	1.018	0.912	0.692	0.784

Figure 6-1. Example Combat Performance Prediction

VII. SUMMARY, RECOMMENDATIONS, APPLICATIONS AND CONCLUSIONS

A. SUMMARY

This thesis illustrated a method to solve the decision problem addressed in the initial chapter based upon expert military judgment. Specifically, this thesis produced a model that evaluates the situation based upon doctrinal planning factors; estimates the organizational readiness of each brigade; combines the results of these two steps; and culminates with an array of information for each brigade that permits division, corps or theater commanders to optimize their brigade mission assignment selections exclusive of maneuver considerations.

Since using average values as data input for the thesis model will not necessarily produce more accurate theater wargame results, nor more accurately reflect reality, the model intentionally uses one individual expert's opinion as computational input rather than all the expert's average judgment whenever possible. This approach is believed to better model reality, especially since a single "standard" judgment does not exist for the types of decisions evaluated. However, should the average value for computational input within the model be desired, a single "standard" value can be produced from the information contained within the Appendices. The model also assumes the theater level wargame will be played a large number of times to identify trends worthy of

analysis by the theater commander rather than just a few iterations.

In developing the process to recreate the brigade mission assignment decision, three separate relative scale comparisons were required to:

- Determine the "ideal" brigade task organization for each situation.
- Determine the "shape" of the organizational readiness curve for each of the four factors considered to influence the brigade's behavior.
- Determine the "importance" of each organizational readiness or behavior factor.

Using the techniques afforded by the Analytic Hierarchy Process (AHP), the results of the three comparisons are combined to generate a data base of matrices for input to the theater wargame, thus permitting the wargame to optimize mission assignment based upon maneuver requirements, the situation and the organizational readiness of each considered brigade.

The true richness of the model is illustrated by Figure 7-1.

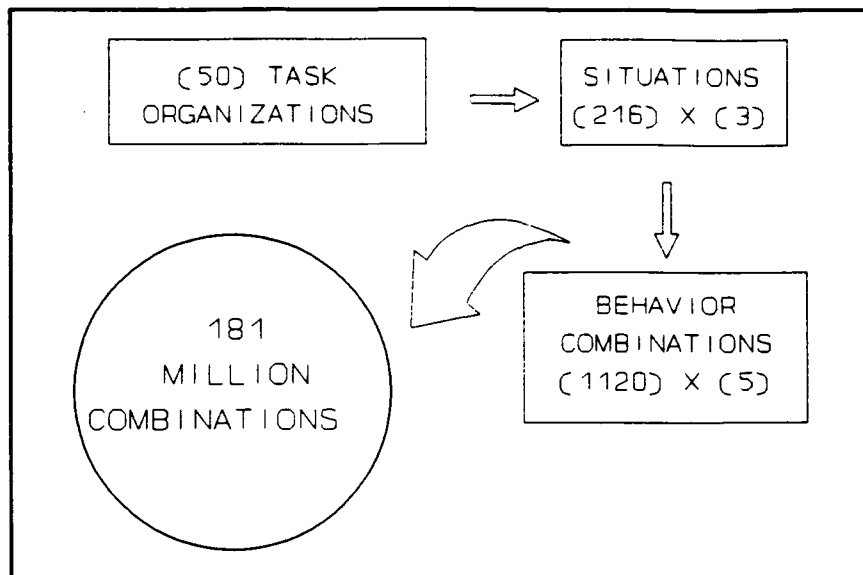


Figure 7-1. Model Richness

The conservatively estimated 181,000,000 combinations represent the spectrum of considerations that combine specific conditions, combat units and organizational readiness factors that division or higher commanders and staffs review prior to the assignment of a brigade to a mission. The estimate of only 50 brigade task organizations is very conservative. There are actually 1024 combinations of three or less organizations possible for each of the five unit types within a brigade. However, the vast majority of those combinations are not reasonable war fighting organizations. The 181 million combinations also assumes all 216 situations possess at least three task organization estimates each. Though each behavior curve possesses only a single shape, 1120 combinations of factor levels are possible to combine with each of the five weighting schemes to represent a brigade's

organizational readiness. The inclusion of only one additional Brigade Influence Factor Survey into the model increases by 20 percent (36,000,000) the total number of combinations possible that the thesis model can consider.

B. RECOMMENDATIONS

The results from each Brigade Task Organization Survey, Brigade Influence Factor Survey, the comparisons required to produce the shape of the behavior curves and most importantly, the model's results require validation before applying the model to a theater level simulation. The judgment of previous survey participants is recommended to assist with the validation process.

Additional surveys are required to both complete and enrich the data base. As a minimum, each situation should possess the results of three task organization surveys, and task organization surveys that do not possess a consistency ratio (CR) of 0.3 or less should not receive consideration for use within the model.

Few comments were generated by the Army War College faculty concerning the structure of the task organization surveys. Appendix G contains a synopsis of the pertinent comments as well as specific comments on methods to improve survey quality.

C. APPLICATIONS

The Analytic Hierarchy Process is both a very rich and robust process. Similar procedures that determined the "ideal" brigade task organization for each situation can easily be applied to the process of organizing aviation or naval assets for the conduct of various missions. Additionally, the systems application of AHP illustrated by the development of the brigade behavior curves could be used to prioritize targets within the theater level simulation.

D. CONCLUSIONS

This thesis illustrated a method to reproduce expert decision-making in a given situation based upon expert judgment. Specifically, the thesis model, constructed from gathered expert opinion and the application of the Analytic Hierarchy Process, reproduces the division commander or higher's decision of assigning a brigade to a mission exclusive of maneuver considerations.

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APPENDIX A. SAMPLE TASK ORGANIZATION SURVEY PACKET

DEPARTMENT OF THE ARMY

TRADOC ANALYSIS COMMAND-MONTEREY

P.O. BOX 8692, NAVAL POSTGRADUATE SCHOOL
MONTEREY, CALIFORNIA 93943-0692

PACKET NUMBER - 18

1. WHO USES THE RESULTS OF THIS QUESTIONNAIRE?

The Department of Operations Research and Systems Analysis at the Naval Postgraduate School functioning in support of the Joint Chiefs of Staff, Section J-8, (Force Structure Resources and Assessment), will use the results of this questionnaire to improve existing Department of Defense theater level simulations.

2. THIS QUESTIONNAIRE WILL HELP SOLVE THE FOLLOWING PROBLEM.

Department of Defense theater level simulations do not accurately reflect a theater commander's decision making process or the maneuver of his ground forces in a plausible manner.

Typically, decisions to attack, defend or delay remain based solely upon the relative sizes of the opposing forces, a concept known as force ratios. This failure to reasonably represent the Command, Control, Communications and Intelligence (C³I) or decision making process, eliminates not only the "fog of war", a condition that affects military decision makers at every level, but also the ability to influence the outcome of a campaign by affecting an enemy's decision making process.

Current automated theater wargames also restrict movement of forces to predesignated corridors throughout the simulations. This requires opposing forces to "fight" each other within predefined boundaries while nearly isolated from the influences of adjacent engagements and unable to exploit the opportunities for maneuver offered by adjacent terrain. This maneuver restriction prohibits such routine operational maneuvers as flank attacks, turning movements, encirclements, and single and double envelopments.

3. HOW ARE THE RESULTS OF THIS QUESTIONNAIRE USED?

The professional judgements you provide by completing this questionnaire will form the basis for identifying the "ideal" brigade task organizations - given both a specific mission and set of conditions - for use within a DOD theater level simulation.

BRIGADE TASK ORGANIZATION QUESTIONNAIRE

4. TIME TO COMPLETE.

Five minutes or less to read and understand the directions.
Five minutes or less to complete each of the twelve situations
for a total maximum time of 65 minutes.

I. Survey Purpose. This questionnaire attempts to quantify your professional judgement for use as a data base within a fully automated theater level wargame. You will be asked to perform a series of ten comparisons. Each question asks you to compare the contributions of different tactical organizations towards mission accomplishment, given a specific situation described by combinations of the following conditions.

II. Organizations and Conditions.

A. Units available for Task Organization -

1. Infantry Battalion
2. Mechanized Infantry Battalion (M2 equipped)
3. Armor Battalion (M1A1 equipped)
4. Artillery Battalion (Direct Support, towed or SP, as appropriate to support an infantry or mechanized infantry/armor brigade)
5. Engineer Company (Capable of performing mobility, counter-mobility or survivability tasks as appropriate for mission.)

B. Conditions - (Assume - Southwest Asia Region)

1. Missions - Brigade will Attack, Defend or Delay.
2. Threat Formations -
 - a. Armor/Mechanized Infantry (Soviet Equipped)
 - b. Infantry (Soviet Equipped)
3. Terrain throughout Objective -
 - a. Urban (predominantly level)
 - b. Mountainous
 - c. Flat to Rolling
4. Visibility - Observation Range
 - a. Unlimited
 - b. Reduced (3/4 Moon)
5. Average Engagement Window -
 - a. 3 km or greater
 - b. 1 km to 3 km
 - c. less than 1 km
6. Area Trafficability -
 - a. Supports vehicle movements
 - b. Restricts vehicles to roads due to structures or terrain

BRIGADE TASK ORGANIZATION QUESTIONNAIRE

III. Directions.

A. Consider the situation described at the top of each page.

B. Assume your brigade will possess enough combat power to successfully accomplish your stated mission.

C. Complete each comparison on the following page by:

1. circling the organization contributing more to the success of the brigade and circling the number indicating the degree of how much more contributing is the one organization than the other or;

2. if both organizations contribute equally, indicate this judgement by circling the number 1.

DEGREE OF CONTRIBUTION SCALE DEFINITIONS

1	3	5	7	9
(Equal)	(Somewhat Greater)	(Moderate)	(Large)	(Vast)

1 - Equally contributing organizations, you believe each organization contributes equally to the brigade's mission success and would prefer equal amounts of the listed organizations within the Brigade's task organization.

2,4,6,8 - Use these judgements to fine tune your estimates.

EXAMPLE 1: Circling one of the organizations and the number 2, indicates you believe the organization you circled contributes an amount between "equal" and "somewhat greater" to the brigade's mission success than the organization you did not circle and given the opportunity, you would prefer a similar amount more of the organization you circled in the brigade's task organization than the organization you did not circle.

EXAMPLE 2: Circling neither organization and the number 1, indicates you believe both organizations contribute equally to the brigade's mission success.

BRIGADE TASK ORGANIZATION QUESTIONNAIRE

Situation Number 313121 - 171

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Supports Vehicles*

TACTICAL ORGANIZATION COMPARISONS

- | | | | | | | | | | |
|-----|--|---|---|---|---|---|---|---|--|
| 1. | Armor Battalion or Engineer Company | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 2. | Engineer Company or Artillery Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 3. | Infantry Battalion or Engineer Company | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 4. | Mechanized Infantry Battalion or Armor Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 5. | Engineer Company or Mechanized Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 6. | Infantry Battalion or Artillery Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 7. | Armor Battalion or Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 8. | Artillery Battalion or Mechanized Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 9. | Artillery Battalion or Armor Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 10. | Mechanized Infantry Battalion or Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |

BRIGADE TASK ORGANIZATION QUESTIONNAIRE

Situation Number 213231 - 107

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

TACTICAL ORGANIZATION COMPARISONS

- | | | | | | | | | | |
|-----|--|---|---|---|---|---|---|---|--|
| 1. | Armor Battalion or Engineer Company | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 2. | Engineer Company or Artillery Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 3. | Infantry Battalion or Engineer Company | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 4. | Mechanized Infantry Battalion or Armor Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 5. | Engineer Company or Mechanized Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 6. | Infantry Battalion or Artillery Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 7. | Armor Battalion or Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 8. | Artillery Battalion or Mechanized Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 9. | Artillery Battalion or Armor Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 10. | Mechanized Infantry Battalion or Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |

BRIGADE TASK ORGANIZATION QUESTIONNAIRE

Situation Number 211212 - 80

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

TACTICAL ORGANIZATION COMPARISONS

- | | | | | | | | | |
|-----|--|---|---|---|---|---|---|---|
| 1. | Armor Battalion or Engineer Company | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 2. | Engineer Company or Artillery Battalion | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 3. | Infantry Battalion or Engineer Company | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 4. | Mechanized Infantry Battalion or Armor Battalion | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 5. | Engineer Company or Mechanized Infantry Battalion | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 6. | Infantry Battalion or Artillery Battalion | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 7. | Armor Battalion or Infantry Battalion | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 8. | Artillery Battalion or Mechanized Infantry Battalion | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 9. | Artillery Battalion or Armor Battalion | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 10. | Mechanized Infantry Battalion or Infantry Battalion | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

BRIGADE TASK ORGANIZATION QUESTIONNAIRE

Situation Number 322121 - 195

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

TACTICAL ORGANIZATION COMPARISONS

- | | | | | | | | | |
|-----|--|---|---|---|---|---|---|---|
| 1. | Armor Battalion or Engineer Company | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 2. | Engineer Company or Artillery Battalion | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 3. | Infantry Battalion or Engineer Company | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 4. | Mechanized Infantry Battalion or Armor Battalion | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 5. | Engineer Company or Mechanized Infantry Battalion | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 6. | Infantry Battalion or Artillery Battalion | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 7. | Armor Battalion or Infantry Battalion | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 8. | Artillery Battalion or Mechanized Infantry Battalion | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 9. | Artillery Battalion or Armor Battalion | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | | | | | | |
| 10. | Mechanized Infantry Battalion or Infantry Battalion | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

BRIGADE TASK ORGANIZATION QUESTIONNAIRE

Situation Number 223222 - 142

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Restricts Vehicles*

TACTICAL ORGANIZATION COMPARISONS

- | | | | | | | | | | |
|-----|--|---|---|---|---|---|---|---|--|
| 1. | Armor Battalion or Engineer Company | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 2. | Engineer Company or Artillery Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 3. | Infantry Battalion or Engineer Company | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 4. | Mechanized Infantry Battalion or Armor Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 5. | Engineer Company or Mechanized Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 6. | Infantry Battalion or Artillery Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 7. | Armor Battalion or Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 8. | Artillery Battalion or Mechanized Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 9. | Artillery Battalion or Armor Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 10. | Mechanized Infantry Battalion or Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |

BRIGADE TASK ORGANIZATION QUESTIONNAIRE

Situation Number 223231 - 143

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

TACTICAL ORGANIZATION COMPARISONS

- | | | | | | | | | | |
|-----|--|---|---|---|---|---|---|---|--|
| 1. | Armor Battalion or Engineer Company | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 2. | Engineer Company or Artillery Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 3. | Infantry Battalion or Engineer Company | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 4. | Mechanized Infantry Battalion or Armor Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 5. | Engineer Company or Mechanized Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 6. | Infantry Battalion or Artillery Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 7. | Armor Battalion or Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 8. | Artillery Battalion or Mechanized Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 9. | Artillery Battalion or Armor Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 10. | Mechanized Infantry Battalion or Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |

BRIGADE TASK ORGANIZATION QUESTIONNAIRE

Situation Number 111222 - 10

1. Brigade Mission - *Attack*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Restricts Vehicles*

TACTICAL ORGANIZATION COMPARISONS

- | | | | | | | | | | |
|-----|--|---|---|---|---|---|---|---|--|
| 1. | Armor Battalion or Engineer Company | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 2. | Engineer Company or Artillery Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 3. | Infantry Battalion or Engineer Company | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 4. | Mechanized Infantry Battalion or Armor Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 5. | Engineer Company or Mechanized Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 6. | Infantry Battalion or Artillery Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 7. | Armor Battalion or Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 8. | Artillery Battalion or Mechanized Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 9. | Artillery Battalion or Armor Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 10. | Mechanized Infantry Battalion or Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |

BRIGADE TASK ORGANIZATION QUESTIONNAIRE

Situation Number 121231 - 47

1. Brigade Mission - **Attack**
2. Threat Force - **Infantry**
3. Terrain - **Urban (predominantly level)**
4. Visibility - **Reduced**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Supports Vehicles**

TACTICAL ORGANIZATION COMPARISONS

- | | | | | | | | | | |
|-----|--|---|---|---|---|---|---|---|--|
| 1. | Armor Battalion or Engineer Company | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 2. | Engineer Company or Artillery Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 3. | Infantry Battalion or Engineer Company | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 4. | Mechanized Infantry Battalion or Armor Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 5. | Engineer Company or Mechanized Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 6. | Infantry Battalion or Artillery Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 7. | Armor Battalion or Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 8. | Artillery Battalion or Mechanized Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 9. | Artillery Battalion or Armor Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 10. | Mechanized Infantry Battalion or Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |

BRIGADE TASK ORGANIZATION QUESTIONNAIRE

Situation Number 221132 - 114

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

TACTICAL ORGANIZATION COMPARISONS

1. Armor Battalion or Engineer Company
1 2 3 4 5 6 7 8 9
2. Engineer Company or Artillery Battalion
1 2 3 4 5 6 7 8 9
3. Infantry Battalion or Engineer Company
1 2 3 4 5 6 7 8 9
4. Mechanized Infantry Battalion or Armor Battalion
1 2 3 4 5 6 7 8 9
5. Engineer Company or Mechanized Infantry Battalion
1 2 3 4 5 6 7 8 9
6. Infantry Battalion or Artillery Battalion
1 2 3 4 5 6 7 8 9
7. Armor Battalion or Infantry Battalion
1 2 3 4 5 6 7 8 9
8. Artillery Battalion or Mechanized Infantry Battalion
1 2 3 4 5 6 7 8 9
9. Artillery Battalion or Armor Battalion
1 2 3 4 5 6 7 8 9
10. Mechanized Infantry Battalion or Infantry Battalion
1 2 3 4 5 6 7 8 9

BRIGADE TASK ORGANIZATION QUESTIONNAIRE

Situation Number 213121 - 99

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Supports Vehicles*

TACTICAL ORGANIZATION COMPARISONS

- | | | | | | | | | | |
|-----|--|---|---|---|---|---|---|---|--|
| 1. | Armor Battalion or Engineer Company | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 2. | Engineer Company or Artillery Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 3. | Infantry Battalion or Engineer Company | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 4. | Mechanized Infantry Battalion or Armor Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 5. | Engineer Company or Mechanized Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 6. | Infantry Battalion or Artillery Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 7. | Armor Battalion or Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 8. | Artillery Battalion or Mechanized Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 9. | Artillery Battalion or Armor Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| | | | | | | | | | |
| 10. | Mechanized Infantry Battalion or Infantry Battalion | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |

BRIGADE TASK ORGANIZATION QUESTIONNAIRE

Situation Number 312211 - 163

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

TACTICAL ORGANIZATION COMPARISONS

1. Armor Battalion or Engineer Company
1 2 3 4 5 6 7 8 9
2. Engineer Company or Artillery Battalion
1 2 3 4 5 6 7 8 9
3. Infantry Battalion or Engineer Company
1 2 3 4 5 6 7 8 9
4. Mechanized Infantry Battalion or Armor Battalion
1 2 3 4 5 6 7 8 9
5. Engineer Company or Mechanized Infantry Battalion
1 2 3 4 5 6 7 8 9
6. Infantry Battalion or Artillery Battalion
1 2 3 4 5 6 7 8 9
7. Armor Battalion or Infantry Battalion
1 2 3 4 5 6 7 8 9
8. Artillery Battalion or Mechanized Infantry Battalion
1 2 3 4 5 6 7 8 9
9. Artillery Battalion or Armor Battalion
1 2 3 4 5 6 7 8 9
10. Mechanized Infantry Battalion or Infantry Battalion
1 2 3 4 5 6 7 8 9

BRIGADE TASK ORGANIZATION QUESTIONNAIRE

Situation Number 113131 - 29

1. Brigade Mission - *Attack*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

TACTICAL ORGANIZATION COMPARISONS

1. Armor Battalion or Engineer Company
1 2 3 4 5 6 7 8 9
2. Engineer Company or Artillery Battalion
1 2 3 4 5 6 7 8 9
3. Infantry Battalion or Engineer Company
1 2 3 4 5 6 7 8 9
4. Mechanized Infantry Battalion or Armor Battalion
1 2 3 4 5 6 7 8 9
5. Engineer Company or Mechanized Infantry Battalion
1 2 3 4 5 6 7 8 9
6. Infantry Battalion or Artillery Battalion
1 2 3 4 5 6 7 8 9
7. Armor Battalion or Infantry Battalion
1 2 3 4 5 6 7 8 9
8. Artillery Battalion or Mechanized Infantry Battalion
1 2 3 4 5 6 7 8 9
9. Artillery Battalion or Armor Battalion
1 2 3 4 5 6 7 8 9
10. Mechanized Infantry Battalion or Infantry Battalion
1 2 3 4 5 6 7 8 9

BRIGADE TASK ORGANIZATION QUESTIONNAIRE

IV. Survey Participant Data. Please circle the appropriate information describing your military experiences.

DUTY STATUS

Active Reserve

SERVICE

US Army US Marine Corps

BRANCH, if US Army

Armor, Infantry, Artillery, Intelligence, Air Defense,
Engineer, Signal Corps, Other

MOSs possessed, if Marine Corps

LAST FIVE OPERATIONAL BILLETS HELD AND TIME IN BILLET

Billet	Time in Billet (Months)
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

CAREER DUTY LOCATIONS (Circle as many appropriate)

North America, Southwest Asia, Central America, Europe,
Korea, South America

If you found this questionnaire difficult to understand or complete, please describe the problems you encountered.

APPENDIX B. ORGANIZATIONAL READINESS QUESTIONNAIRE

BRIGADE MISSION ASSIGNMENT MODEL QUESTIONNAIRE

1. **BACKGROUND/DEFINITIONS.** I need to collect your professional judgement on a very important part of my model. I am looking to determine the importance of the following four factors in order to develop a process that estimates a brigade's organizational readiness. The four factors are;

a. **Experience/Training** - The state of training and past experiences prior to preparing for the mission. This spectrum ranges from: "Rookie" - combat deployable, just new to; "Veteran" -experienced fighter within the theater.

b. **Logistics** - Amounts of all classes of supply and their ability to assist a brigade plan, prepare and execute the mission. This spectrum ranges from "100-90" percent to less than "60" percent.

c. **Preparation Time** - The amount of time given to plan, coordinate, rehearse, rest and resupply prior to executing the mission. Time increments ranging from "0-6" hours to "1 Week - 1 Month".

d. **Continuous Operations** - A generally negative factor associated with the actions of the brigade during the immediately preceding time periods. Consider this as a "lag" factor or the recovery required from the previous mission before the preparation time associated with the next mission becomes useful. Time increments range from "less than 12" hours to "greater than 72" hours.

2. **SCALE.** On the next page you will find the survey. Use the following scale to provide your answers.

DEGREE OF IMPORTANCE SCALE

1- Equal, 3- Somewhat Greater, 5- Moderate, 7- Large, 9- Vast
2,4,6,8 - Values available for finer judgements.

3. **QUESTIONS.** There are four groups of six comparisons on the following pages. Each group of questions assumes: All factors influence the **behavior** associated with the other factors as well as that factor itself. Example: Logistics, this factor is in itself important, because you need an amount of each of the classes of supply, yet you also need adequately trained personnel, enough time to prepare and enough time to overcome the effects, if any, of the immediately preceding operation. The "relative importance" of each of these influences is the opinion of yours I am trying to capture with this survey.

4. **DIRECTIONS.**

a. Determine the factor receiving the influence.

b. Complete each of the six comparisons by:

1. circling the more important influence and circling

the number indicating the degree of how much more important is the influence you circled than the influence you did not or;

2. if both influences are equally important, indicate your judgement by circling the number 1.

1. Factor receiving the influence is **PREPARATION TIME**.

The influence of which factor is more important;

LOGISTICS or CONTINUOUS OPERATIONS

1 2 3 4 5 6 7 8 9

CONTINUOUS OPERATIONS or EXPERIENCE/TRAINING

1 2 3 4 5 6 7 8 9

PREPARATION TIME or EXPERIENCE/TRAINING

1 2 3 4 5 6 7 8 9

LOGISTICS or EXPERIENCE/TRAINING

1 2 3 4 5 6 7 8 9

CONTINUOUS OPERATIONS or PREPARATION TIME

1 2 3 4 5 6 7 8 9

PREPARATION TIME or LOGISTICS

1 2 3 4 5 6 7 8 9

2. Factor receiving the influence is **LOGISTICS**.

The influence of which factor is more important;

LOGISTICS or CONTINUOUS OPERATIONS

1 2 3 4 5 6 7 8 9

CONTINUOUS OPERATIONS or EXPERIENCE/TRAINING

1 2 3 4 5 6 7 8 9

PREPARATION TIME or EXPERIENCE/TRAINING

1 2 3 4 5 6 7 8 9

LOGISTICS or EXPERIENCE/TRAINING

1 2 3 4 5 6 7 8 9

CONTINUOUS OPERATIONS or PREPARATION TIME

1 2 3 4 5 6 7 8 9

PREPARATION TIME or LOGISTICS

1 2 3 4 5 6 7 8 9

3. Factor receiving the influence is **CONTINUOUS OPERATIONS**.

The influence of which factor is more important;

LOGISTICS or CONTINUOUS OPERATIONS

1 2 3 4 5 6 7 8 9

CONTINUOUS OPERATIONS or EXPERIENCE/TRAINING

1 2 3 4 5 6 7 8 9

PREPARATION TIME or EXPERIENCE/TRAINING

1 2 3 4 5 6 7 8 9

LOGISTICS or EXPERIENCE/TRAINING

1 2 3 4 5 6 7 8 9

CONTINUOUS OPERATIONS or PREPARATION TIME

1 2 3 4 5 6 7 8 9

PREPARATION TIME or LOGISTICS

1 2 3 4 5 6 7 8 9

4. Factor receiving the influence is **EXPERIENCE/TRAINING**.

The influence of which factor is more important;

LOGISTICS or CONTINUOUS OPERATIONS

1 2 3 4 5 6 7 8 9

CONTINUOUS OPERATIONS or EXPERIENCE/TRAINING

1 2 3 4 5 6 7 8 9

PREPARATION TIME or EXPERIENCE/TRAINING

1 2 3 4 5 6 7 8 9

LOGISTICS or EXPERIENCE/TRAINING

1 2 3 4 5 6 7 8 9

CONTINUOUS OPERATIONS or PREPARATION TIME

1 2 3 4 5 6 7 8 9

PREPARATION TIME or LOGISTICS

1 2 3 4 5 6 7 8 9

APPENDIX C. TASK ORGANIZATION QUESTIONNAIRE RESULTS

Situation Number 111111 - 1

1. Brigade Mission - *Attack*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.388			
Artillery	.311			
Engineer	.032			
Mechanized	.211			
Infantry	.056			
Consistency Ratio	.266			

Situation Number 111112 - 2

1. Brigade Mission - *Attack*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.113	.028		
Artillery	.348	.558		
Engineer	.214	.225		
Mechanized	.238	.126		
Infantry	.084	.060		
Consistency Ratio	.362	.162		

Situation Number 111121 - 3

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Urban (predominantly level)**
4. Visibility - **Unlimited**
5. Average Engagement Window - **1 km to 3 km**
6. Trafficability - **Supports Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.172			
Artillery	.182			
Engineer	.089			
Mechanized	.345			
Infantry	.210			
Consistency Ratio	.026			

Situation Number 111131 - 5

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Urban (predominantly level)**
4. Visibility - **Unlimited**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Supports vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.100	.246		
Artillery	.057	.078		
Engineer	.050	.034		
Mechanized	.325	.505		
Infantry	.465	.133		
Consistency Ratio	.227	.183		

Situation Number 111132 - 6

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Urban (predominantly level)**
4. Visibility - **Unlimited**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Restricts Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.195	.155		
Artillery	.029	.033		
Engineer	.060	.306		
Mechanized	.182	.234		
Infantry	.531	.269		
Consistency Ratio	.198	.341		

Situation Number 111211 - 7

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Urban (predominantly level)**
4. Visibility - **Reduced**
5. Average Engagement Window - **3 km or greater**
6. Trafficability - **Supports Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.087	.375		
Artillery	.092	.153		
Engineer	.033	.072		
Mechanized	.330	.358		
Infantry	.455	.039		
Consistency Ratio	.140	.178		

Situation Number 111212 - 8

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Urban (predominantly level)**
4. Visibility - **Reduced**
5. Average Engagement Window - **3 km or greater**
6. Trafficability - **Restricts Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.026	.139		
Artillery	.460	.483		
Engineer	.114	.042		
Mechanized	.136	.267		
Infantry	.261	.070		
Consistency Ratio	.154	.217		

Situation Number 111221 - 9

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Urban (predominantly level)**
4. Visibility - **Reduced**
5. Average Engagement Window - **1 km to 3 km**
6. Trafficability - **Supports Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.498			
Artillery	.136			
Engineer	.049			
Mechanized	.246			
Infantry	.069			
Consistency Ratio	.087			

Situation Number 111222 - 10

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Urban (predominantly level)**
4. Visibility - **Reduced**
5. Average Engagement Window - **1 to 3 km**
6. Trafficability - **Restricts Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.378	.340	.303	.542
Artillery	.068	.237	.254	.060
Engineer	.029	.207	.062	.115
Mechanized	.396	.095	.335	.256
Infantry	.126	.118	.043	.023
Consistency Ratio	.173	.098	.022	.241

	Sample 5	Sample 6	Sample 7	Sample 8
Armor	.373	.261	.333	.121
Artillery	.095	.095	.286	.368
Engineer	.035	.059	.046	.040
Mechanized	.339	.553	.116	.393
Infantry	.096	.030	.528	.076
Consistency Ratio	.116	.265	.333	.129

	Sample 9	Sample 10	Sample 11	Sample 12
Armor	.036	.171	.253	.218
Artillery	.103	.158	.107	.272
Engineer	.062	.196	.191	.132
Mechanized	.561	.213	.239	.250
Infantry	.237	.259	.208	.125
Consistency Ratio	.190	.149	.070	.025

Situation Number 111231 - 11

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Urban (predominantly level)**
4. Visibility - **Reduced**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Supports Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.033	.063		
Artillery	.414	.502		
Engineer	.172	.108		
Mechanized	.121	.252		
Infantry	.257	.073		
Consistency Ratio	.119	.133		

Situation Number 111232 - 12

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Urban (predominantly level)**
4. Visibility - **Reduced**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Restricts Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.593	.045		
Artillery	.094	.462		
Engineer	.038	.145		
Mechanized	.180	.079		
Infantry	.092	.267		
Consistency Ratio	.123	.271		

Situation Number 112111 - 13

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Mountainous**
4. Visibility - **Unlimited**
5. Average Engagement Window - **3 km or greater**
6. Trafficability - **Supports Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.207			
Artillery	.109			
Engineer	.034			
Mechanized	.585			
Infantry	.063			
Consistency Ratio	.123			

Situation Number 112112 - 14

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Mountainous**
4. Visibility - **Unlimited**
5. Average Engagement Window - **3 km or greater**
6. Trafficability - **Restricts Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.033	.024		
Artillery	.188	.574		
Engineer	.272	.255		
Mechanized	.110	.047		
Infantry	.394	.097		
Consistency Ratio	.168	.266		

Situation Number 112121 - 15

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Mountainous**
4. Visibility - **Unlimited**
5. Average Engagement Window - **1 km to 3 km**
6. Trafficability - **Supports Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.462			
Artillery	.203			
Engineer	.035			
Mechanized	.246			
Infantry	.051			
Consistency Ratio	.159			

Situation Number 112122 - 16

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Mountainous**
4. Visibility - **Unlimited**
5. Average Engagement Window - **1 km to 3 km**
6. Trafficability - **Restricts Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.054	.177		
Artillery	.545	.038		
Engineer	.026	.410		
Mechanized	.115	.304		
Infantry	.258	.068		
Consistency Ratio	.295	.205		

Situation Number 112131 - 17

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Mountainous**
4. Visibility - **Unlimited**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Supports Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.298	.106		
Artillery	.196	.192		
Engineer	.056	.073		
Mechanized	.298	.548		
Infantry	.149	.079		
Consistency Ratio	.030	.518		

Situation Number 112132 - 18

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Mountainous**
4. Visibility - **Unlimited**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Restricts Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.172			
Artillery	.267			
Engineer	.172			
Mechanized	.289			
Infantry	.098			
Consistency Ratio	.194			

Situation Number 112211 - 19

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Mountainous**
4. Visibility - **Reduced**
5. Average Engagement Window - **3 km or greater**
6. Trafficability - **Supports Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.140	.125		
Artillery	.133	.070		
Engineer	.096	.028		
Mechanized	.231	.543		
Infantry	.398	.231		
Consistency Ratio	.045	.291		

Situation Number 112212 - 20

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Mountainous**
4. Visibility - **Reduced**
5. Average Engagement Window - **3 km or greater**
6. Trafficability - **Restricts Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.293	.073		
Artillery	.336	.157		
Engineer	.030	.605		
Mechanized	.222	.123		
Infantry	.117	.039		
Consistency Ratio	.126	.174		

Situation Number 112222 - 22

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Mountainous**
4. Visibility - **Reduced**
5. Average Engagement Window - **1 to 3 km**
6. Trafficability - **Restricts Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.080	.049		
Artillery	.225	.137		
Engineer	.140	.064		
Mechanized	.092	.461		
Infantry	.461	.287		
Consistency Ratio	.031	.267		

Situation Number 112231 - 23

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Mountainous**
4. Visibility - **Reduced**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Supports Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.195	.161		
Artillery	.195	.166		
Engineer	.141	.043		
Mechanized	.195	.598		
Infantry	.270	.030		
Consistency Ratio	.072	.162		

Situation Number 112232 - 24

1. Brigade Mission - *Attack*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.094	.039		
Artillery	.249	.297		
Engineer	.180	.087		
Mechanized	.130	.080		
Infantry	.344	.494		
Consistency Ratio	.119	.218		

Situation Number 113112 - 26

1. Brigade Mission - *Attack*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.234	.296		
Artillery	.260	.126		
Engineer	.188	.026		
Mechanized	.092	.493		
Infantry	.223	.056		
Consistency Ratio	.199	.197		

Situation Number 113121 - 27

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Flat to Rolling**
4. Visibility - **Unlimited**
5. Average Engagement Window - **1 to 3 km**
6. Trafficability - **Supports Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.531	.489		
Artillery	.212	.165		
Engineer	.027	.063		
Mechanized	.176	.252		
Infantry	.052	.029		
Consistency Ratio	.072	.149		

Situation Number 113122 - 28

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Flat to Rolling**
4. Visibility - **Unlimited**
5. Average Engagement Window - **1 to 3 km**
6. Trafficability - **Restricts Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.492			
Artillery	.258			
Engineer	.071			
Mechanized	.155			
Infantry	.021			
Consistency Ratio	.181			

Situation Number 113131 - 29

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Flat to Rolling**
4. Visibility - **Unlimited**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Supports Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.300	.231	.324	.359
Artillery	.105	.245	.214	.254
Engineer	.146	.213	.123	.088
Mechanized	.300	.231	.214	.235
Infantry	.146	.078	.123	.063
Consistency Ratio	.036	.008	.017	.022

	Sample 5	Sample 6	Sample 7	Sample 8
Armor	.246	.301	.397	.391
Artillery	.205	.290	.042	.057
Engineer	.143	.077	.055	.029
Mechanized	.328	.288	.414	.404
Infantry	.076	.042	.090	.117
Consistency Ratio	.079	.052	.225	.196

	Sample 9	Sample 10	Sample 11	Sample 12
Armor	.542	.584	.538	.293
Artillery	.125	.098	.125	.124
Engineer	.031	.047	.059	.063
Mechanized	.258	.247	.248	.485
Infantry	.042	.021	.026	.033
Consistency Ratio	.217	.317	.201	.135

Situation Number 113211 - 31

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Flat to Rolling**
4. Visibility - **Reduced**
5. Average Engagement Window - **3 km or greater**
6. Trafficability - **Supports Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.305	.545		
Artillery	.305	.126		
Engineer	.027	.023		
Mechanized	.297	.252		
Infantry	.062	.050		
Consistency Ratio	.099	.297		

Situation Number 113212 - 32

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Flat to Rolling**
4. Visibility - **Reduced**
5. Average Engagement Window - **3 km or greater**
6. Trafficability - **Restricts Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.596	.266		
Artillery	.120	.461		
Engineer	.040	.045		
Mechanized	.215	.149		
Infantry	.026	.076		
Consistency Ratio	.202	.201		

Situation Number 113231 - 35

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Flat to Rolling**
4. Visibility - **Reduced**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Supports Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.320	.555		
Artillery	.165	.225		
Engineer	.100	.024		
Mechanized	.295	.144		
Infantry	.118	.052		
Consistency Ratio	.024	.223		

Situation Number 113232 - 36

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Flat to Rolling**
4. Visibility - **Reduced**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Restricts Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.072			
Artillery	.631			
Engineer	.031			
Mechanized	.108			
Infantry	.155			
Consistency Ratio	.135			

Situation Number 121111 - 37

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.253			
Artillery	.109			
Engineer	.062			
Mechanized	.327			
Infantry	.247			
Consistency Ratio	.081			

Situation Number 121112 - 38

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.038	.114		
Artillery	.076	.090		
Engineer	.277	.043		
Mechanized	.194	.197		
Infantry	.412	.553		
Consistency Ratio	.153	.192		

Situation Number 121121 - 39

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.065			
Artillery	.033			
Engineer	.129			
Mechanized	.524			
Infantry	.246			
Consistency Ratio	.239			

Situation Number 121122 - 40

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.074	.048		
Artillery	.399	.304		
Engineer	.057	.112		
Mechanized	.189	.193		
Infantry	.279	.341		
Consistency Ratio	.116	.034		

Situation Number 121132 - 42

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.140	.061		
Artillery	.069	.280		
Engineer	.036	.176		
Mechanized	.453	.289		
Infantry	.299	.192		
Consistency Ratio	.087	1.236		

Situation Number 121211 - 43

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.187	.095		
Artillery	.163	.264		
Engineer	.107	.039		
Mechanized	.215	.435		
Infantry	.326	.164		
Consistency Ratio	.026	.081		

Situation Number 121212 - 44

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.286			
Artillery	.058			
Engineer	.037			
Mechanized	.511			
Infantry	.106			
Consistency Ratio	.197			

Situation Number 121221 - 45

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.143	.531		
Artillery	.164	.240		
Engineer	.143	.031		
Mechanized	.217	.133		
Infantry	.329	.062		
Consistency Ratio	.017	.268		

Situation Number 121222 - 46

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.063	.048		
Artillery	.392	.304		
Engineer	.056	.112		
Mechanized	.213	.193		
Infantry	.274	.341		
Consistency Ratio	.114	.034		

Situation Number 121231 - 47

1. Brigade Mission - **Attack**
2. Threat Force - **Infantry**
3. Terrain - **Urban (predominantly level)**
4. Visibility - **Reduced**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Supports Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.117	.038	.164	.195
Artillery	.057	.382	.204	.128
Engineer	.029	.098	.114	.224
Mechanized	.391	.107	.328	.195
Infantry	.403	.373	.188	.257

Consistency Ratio	.187	.063	.101	.105
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	Sample 5	Sample 6	Sample 7	Sample 8
Armor	.294	.036	.135	.084
Artillery	.104	.124	.155	.199
Engineer	.033	.053	.228	.060
Mechanized	.422	.314	.223	.275
Infantry	.144	.470	.256	.380

Consistency Ratio	.108	.188	.121	.125
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	Sample 9	Sample 10	Sample 11	Sample 12
Armor	.024	.295	.162	.089
Artillery	.111	.236	.104	.103
Engineer	.058	.033	.197	.136
Mechanized	.552	.262	.202	.368
Infantry	.253	.171	.332	.302

Consistency Ratio	.259	.162	.145	.055
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Situation Number 121232 - 48

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.035	.093		
Artillery	.065	.101		
Engineer	.184	.058		
Mechanized	.191	.107		
Infantry	.522	.638		
Consistency Ratio	.181	.319		

Situation Number 122111 - 49

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.290			
Artillery	.146			
Engineer	.039			
Mechanized	.428			
Infantry	.094			
Consistency Ratio	.122			

Situation Number 122122 - 52

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.051			
Artillery	.125			
Engineer	.030			
Mechanized	.404			
Infantry	.387			
Consistency Ratio	.120			

Situation Number 122131 - 53

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.125	.116		
Artillery	.156	.094		
Engineer	.109	.026		
Mechanized	.237	.507		
Infantry	.369	.254		
Consistency Ratio	.016	.185		

Situation Number 122132 - 54

1. Brigade Mission - **Attack**
2. Threat Force - **Infantry**
3. Terrain - **Mountainous**
4. Visibility - **Unlimited**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Restricts Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.118	.097		
Artillery	.211	.353		
Engineer	.068	.140		
Mechanized	.390	.089		
Infantry	.211	.319		
Consistency Ratio	.084	.140		

Situation Number 122212 - 56

1. Brigade Mission - **Attack**
2. Threat Force - **Infantry**
3. Terrain - **Mountainous**
4. Visibility - **Reduced**
5. Average Engagement Window - **3 km or greater**
6. Trafficability - **Restricts Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.180	.031		
Artillery	.369	.270		
Engineer	.088	.053		
Mechanized	.180	.105		
Infantry	.180	.539		
Consistency Ratio	.214	.188		

Situation Number 122222 - 58

1. Brigade Mission - **Attack**
2. Threat Force - **Infantry**
3. Terrain - **Mountainous**
4. Visibility - **Reduced**
5. Average Engagement Window - **1 to 3 km**
6. Trafficability - **Restricts Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.501	.135		
Artillery	.070	.484		
Engineer	.026	.040		
Mechanized	.175	.075		
Infantry	.225	.263		
Consistency Ratio	.242	.426		

Situation Number 122231 - 59

1. Brigade Mission - **Attack**
2. Threat Force - **Infantry**
3. Terrain - **Mountainous**
4. Visibility - **Reduced**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Supports Vehicles**

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.063	.037		
Artillery	.276	.197		
Engineer	.064	.120		
Mechanized	.167	.184		
Infantry	.427	.459		
Consistency Ratio	.079	.065		

Situation Number 122232 - 60

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.139			
Artillery	.286			
Engineer	.060			
Mechanized	.249			
Infantry	.263			
Consistency Ratio	.131			

Situation Number 123111 - 61

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.063			
Artillery	.283			
Engineer	.029			
Mechanized	.311			
Infantry	.311			
Consistency Ratio	.058			

Situation Number 123112 - 62

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.347			
Artillery	.247			
Engineer	.088			
Mechanized	.278			
Infantry	.037			
Consistency Ratio	.055			

Situation Number 123122 - 64

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.540			
Artillery	.117			
Engineer	.057			
Mechanized	.256			
Infantry	.028			
Consistency Ratio	.369			

Situation Number 123132 - 66

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.254			
Artillery	.079			
Engineer	.026			
Mechanized	.585			
Infantry	.053			
Consistency Ratio	.253			

Situation Number 123212 - 68

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.159	.077		
Artillery	.139	.456		
Engineer	.111	.031		
Mechanized	.242	.151		
Infantry	.346	.252		
Consistency Ratio	.020	.184		

Situation Number 123221 - 69

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.590	.199		
Artillery	.174	.293		
Engineer	.027	.026		
Mechanized	.165	.421		
Infantry	.043	.058		
Consistency Ratio	.169	.226		

Situation Number 123222 - 70

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.074			
Artillery	.119			
Engineer	.157			
Mechanized	.342			
Infantry	.305			
Consistency Ratio	.042			

Situation Number 123231 - 71

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.236	.599		
Artillery	.179	.091		
Engineer	.056	.031		
Mechanized	.367	.228		
Infantry	.160	.049		
Consistency Ratio	.205	.185		

Situation Number 123232 - 72

1. Brigade Mission - *Attack*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.592	.129		
Artillery	.095	.080		
Engineer	.030	.038		
Mechanized	.237	.520		
Infantry	.044	.232		
Consistency Ratio	.226	.335		

Situation Number 211111 - 73

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.554			
Artillery	.116			
Engineer	.049			
Mechanized	.255			
Infantry	.023			
Consistency Ratio	.384			

Situation Number 211112 - 74

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.514	.206		
Artillery	.201	.194		
Engineer	.067	.151		
Mechanized	.183	.339		
Infantry	.032	.108		
Consistency Ratio	.081	.765		

Situation Number 211131 - 77

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.051	.203		
Artillery	.228	.575		
Engineer	.147	.131		
Mechanized	.139	.057		
Infantry	.432	.031		
Consistency Ratio	.300	.147		

Situation Number 211132 - 78

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.053			
Artillery	.437			
Engineer	.191			
Mechanized	.193			
Infantry	.124			
Consistency Ratio	.135			

Situation Number 211211 - 79

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.420			
Artillery	.122			
Engineer	.122			
Mechanized	.212			
Infantry	.122			
Consistency Ratio	.012			

Situation Number 211212 - 80

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.190	.299	.387	.492
Artillery	.042	.074	.117	.126
Engineer	.040	.073	.089	.059
Mechanized	.428	.501	.289	.266
Infantry	.298	.050	.115	.054
Consistency Ratio	.104	.253	.253	.229

	Sample 5	Sample 6	Sample 7	Sample 8
Armor	.058	.183	.117	.190
Artillery	.036	.169	.167	.042
Engineer	.146	.089	.221	.040
Mechanized	.188	.229	.239	.428
Infantry	.569	.327	.254	.298
Consistency Ratio	.116	.081	.048	.104

	Sample 9	Sample 10	Sample 11	Sample 12
Armor	.190	.063	.282	.172
Artillery	.042	.029	.027	.197
Engineer	.040	.378	.069	.197
Mechanized	.428	.124	.540	.260
Infantry	.298	.403	.080	.172
Consistency Ratio	.104	.215	.178	.017

Situation Number 211222 - 82

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.044			
Artillery	.128			
Engineer	.076			
Mechanized	.228			
Infantry	.522			
Consistency Ratio	.125			

Situation Number 211231 - 83

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.033	.337		
Artillery	.286	.483		
Engineer	.178	.037		
Mechanized	.155	.116		
Infantry	.345	.025		
Consistency Ratio	.076	.221		

Situation Number 211232 - 84

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.059			
Artillery	.031			
Engineer	.125			
Mechanized	.536			
Infantry	.247			
Consistency Ratio	.260			

Situation Number 212111 - 85

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.499			
Artillery	.131			
Engineer	.053			
Mechanized	.238			
Infantry	.076			
Consistency Ratio	.113			

Situation Number 212112 - 86

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.253	.242		
Artillery	.383	.201		
Engineer	.058	.110		
Mechanized	.167	.359		
Infantry	.137	.085		
Consistency Ratio	.103	.180		

Situation Number 212121 - 87

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.248	.192		
Artillery	.121	.291		
Engineer	.527	.026		
Mechanized	.074	.430		
Infantry	.027	.059		
Consistency Ratio	.246	.232		

Situation Number 212211 - 91

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.503	.253		
Artillery	.100	.253		
Engineer	.068	.177		
Mechanized	.291	.253		
Infantry	.035	.060		
Consistency Ratio	.198	.091		

Situation Number 212212 - 92

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.616	.044		
Artillery	.122	.236		
Engineer	.035	.512		
Mechanized	.181	.071		
Infantry	.044	.135		
Consistency Ratio	.159	.283		

Situation Number 212221 - 93

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.147			
Artillery	.223			
Engineer	.147			
Mechanized	.223			
Infantry	.257			
Consistency Ratio	.141			

Situation Number 212222 - 94

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.293	.074		
Artillery	.168	.388		
Engineer	.146	.087		
Mechanized	.222	.271		
Infantry	.168	.178		
Consistency Ratio	.017	.123		

Situation Number 212231 - 95

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.250			
Artillery	.030			
Engineer	.122			
Mechanized	.530			
Infantry	.066			
Consistency Ratio	.286			

Situation Number 212232 - 96

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.219			
Artillery	.342			
Engineer	.088			
Mechanized	.276			
Infantry	.073			
Consistency Ratio	.497			

Situation Number 213111 - 97

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.499			
Artillery	.129			
Engineer	.063			
Mechanized	.274			
Infantry	.032			
Consistency Ratio	.398			

Situation Number 213112 - 98

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.582			
Artillery	.124			
Engineer	.188			
Mechanized	.084			
Infantry	.020			
Consistency Ratio	.317			

Situation Number 213121 - 99

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.415	.305	.265	.230
Artillery	.133	.245	.230	.396
Engineer	.070	.122	.148	.208
Mechanized	.350	.213	.265	.080
Infantry	.030	.113	.090	.084
Consistency Ratio	.256	.012	.230	.114

	Sample 5	Sample 6	Sample 7	Sample 8
Armor	.348	.342	.532	.430
Artillery	.322	.160	.062	.316
Engineer	.064	.095	.109	.044
Mechanized	.219	.343	.266	.172
Infantry	.045	.058	.029	.036
Consistency Ratio	.300	.033	.261	.119

	Sample 9	Sample 10	Sample 11	Sample 12
Armor	.313	.376	.570	.323
Artillery	.270	.190	.052	.161
Engineer	.072	.282	.079	.161
Mechanized	.270	.102	.265	.245
Infantry	.072	.048	.031	.106
Consistency Ratio	.008	.097	.153	.030

Situation Number 213122 - 100

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.063			
Artillery	.508			
Engineer	.115			
Mechanized	.155			
Infantry	.157			
Consistency Ratio	.453			

Situation Number 213132 - 102

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.245			
Artillery	.161			
Engineer	.179			
Mechanized	.331			
Infantry	.112			
Consistency Ratio	.148			

Situation Number 213211 - 103

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.448	.376		
Artillery	.134	.222		
Engineer	.031	.082		
Mechanized	.306	.270		
Infantry	.078	.048		
Consistency Ratio	.110	.034		

Situation Number 213212 - 104

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.555			
Artillery	.053			
Engineer	.117			
Mechanized	.247			
Infantry	.025			
Consistency Ratio	.352			

Situation Number 213222 - 106

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.312			
Artillery	.185			
Engineer	.196			
Mechanized	.213			
Infantry	.090			
Consistency Ratio	.128			

Situation Number 213231 - 107

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.195	.392	.309	.332
Artillery	.195	.108	.069	.107
Engineer	.195	.032	.030	.214
Mechanized	.270	.408	.481	.186
Infantry	.141	.058	.108	.158
Consistency Ratio	.072	.206	.210	.144

	Sample 5	Sample 6	Sample 7	Sample 8
Armor	.556	.191	.277	.222
Artillery	.050	.165	.122	.222
Engineer	.036	.104	.045	.222
Mechanized	.284	.500	.470	.222
Infantry	.072	.037	.083	.111
Consistency Ratio	.149	.145	.114	.000

	Sample 9	Sample 10	Sample 11	Sample 12
Armor	.390	.529	.288	.246
Artillery	.054	.127	.125	.237
Engineer	.099	.050	.190	.214
Mechanized	.390	.261	.144	.254
Infantry	.064	.031	.251	.047
Consistency Ratio	.154	.218	.061	.014

Situation Number 213232 - 108

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.298	.236		
Artillery	.298	.042		
Engineer	.032	.144		
Mechanized	.307	.542		
Infantry	.062	.033		
Consistency Ratio	.103	.165		

Situation Number 221111 - 109

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.040			
Artillery	.505			
Engineer	.094			
Mechanized	.118			
Infantry	.241			
Consistency Ratio	.134			

Situation Number 221112 - 110

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.082	.025		
Artillery	.077	.584		
Engineer	.024	.208		
Mechanized	.272	.104		
Infantry	.542	.076		
Consistency Ratio	.241	.197		

Situation Number 221121 - 111

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.147			
Artillery	.113			
Engineer	.059			
Mechanized	.310			
Infantry	.369			
Consistency Ratio	.067			

Situation Number 221122 - 112

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.148			
Artillery	.213			
Engineer	.129			
Mechanized	.359			
Infantry	.148			
Consistency Ratio	.328			

Situation Number 221131 - 113

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.068			
Artillery	.032			
Engineer	.333			
Mechanized	.419			
Infantry	.145			
Consistency Ratio	.156			

Situation Number 221132 - 114

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.115	.078	.195	.121
Artillery	.117	.078	.128	.274
Engineer	.293	.135	.195	.244
Mechanized	.135	.222	.257	.167
Infantry	.337	.485	.224	.192
Consistency Ratio	.035	.013	.094	.125

	Sample 5	Sample 6	Sample 7	Sample 8
Armor	.050	.057	.205	.032
Artillery	.050	.311	.270	.108
Engineer	.299	.218	.121	.060
Mechanized	.299	.222	.270	.236
Infantry	.299	.189	.132	.562
Consistency Ratio	.000	.064	.098	.222

	Sample 9	Sample 10	Sample 11	Sample 12
Armor	.199	.036	.027	.037
Artillery	.082	.083	.133	.257
Engineer	.066	.094	.063	.116
Mechanized	.431	.515	.535	.097
Infantry	.220	.269	.241	.490
Consistency Ratio	.270	.188	.216	.065

Situation Number 221211 - 115

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.033	.027		
Artillery	.545	.641		
Engineer	.099	.179		
Mechanized	.135	.054		
Infantry	.185	.098		
Consistency Ratio	.194	.243		

Situation Number 221212 - 116

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.093			
Artillery	.369			
Engineer	.111			
Mechanized	.191			
Infantry	.233			
Consistency Ratio	.065			

Situation Number 221221 - 117

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.142	.066		
Artillery	.188	.535		
Engineer	.124	.038		
Mechanized	.216	.232		
Infantry	.328	.127		
Consistency Ratio	.021	.241		

Situation Number 221222 - 118

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.067	.036		
Artillery	.126	.204		
Engineer	.036	.530		
Mechanized	.271	.137		
Infantry	.497	.090		
Consistency Ratio	.177	.150		

Situation Number 221231 - 119

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.542	.036		
Artillery	.048	.482		
Engineer	.042	.069		
Mechanized	.249	.131		
Infantry	.116	.279		
Consistency Ratio	.188	.397		

Situation Number 221232 - 120

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.040			
Artillery	.270			
Engineer	.132			
Mechanized	.382			
Infantry	.174			
Consistency Ratio	.084			

Situation Number 222112 - 122

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.128	.051		
Artillery	.139	.257		
Engineer	.139	.081		
Mechanized	.243	.139		
Infantry	.348	.469		
Consistency Ratio	.012	.136		

Situation Number 222121 - 123

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.473			
Artillery	.043			
Engineer	.144			
Mechanized	.257			
Infantry	.080			
Consistency Ratio	.290			

Situation Number 222122 - 124

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.047			
Artillery	.122			
Engineer	.079			
Mechanized	.447			
Infantry	.303			
Consistency Ratio	.104			

Situation Number 222131 - 125

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.516	.121		
Artillery	.091	.229		
Engineer	.063	.074		
Mechanized	.203	.357		
Infantry	.125	.217		
Consistency Ratio	.072	.020		

Situation Number 222132 - 126

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.026			
Artillery	.213			
Engineer	.265			
Mechanized	.080			
Infantry	.414			
Consistency Ratio	.277			

Situation Number 222211 - 127

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.137			
Artillery	.276			
Engineer	.488			
Mechanized	.066			
Infantry	.031			
Consistency Ratio	.234			

Situation Number 122212 - 128

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.054			
Artillery	.118			
Engineer	.164			
Mechanized	.229			
Infantry	.433			
Consistency Ratio	.102			

Situation Number 222221 - 129

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.057	.074		
Artillery	.316	.271		
Engineer	.166	.112		
Mechanized	.229	.236		
Infantry	.229	.304		
Consistency Ratio	.072	.027		

Situation Number 222222 - 130

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.142	.051		
Artillery	.188	.152		
Engineer	.124	.099		
Mechanized	.216	.254		
Infantry	.328	.442		
Consistency Ratio	.021	.153		

Situation Number 222232 - 132

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.349			
Artillery	.196			
Engineer	.088			
Mechanized	.220			
Infantry	.145			
Consistency Ratio	.127			

Situation Number 223111 - 133

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.142			
Artillery	.354			
Engineer	.173			
Mechanized	.187			
Infantry	.142			
Consistency Ratio	.126			

Situation Number 223112 - 134

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.173			
Artillery	.183			
Engineer	.057			
Mechanized	.461			
Infantry	.122			
Consistency Ratio	.085			

Situation Number 223121 - 135

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.039	.068		
Artillery	.539	.581		
Engineer	.061	.181		
Mechanized	.257	.138		
Infantry	.101	.030		
Consistency Ratio	.074	.216		

Situation Number 223131 - 137

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.071			
Artillery	.227			
Engineer	.214			
Mechanized	.282			
Infantry	.204			
Consistency Ratio	.306			

Situation Number 223132 - 138

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.241	.036		
Artillery	.241	.238		
Engineer	.241	.113		
Mechanized	.233	.060		
Infantry	.041	.549		
Consistency Ratio	.000	.230		

Situation Number 223211 - 139

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.169	.056		
Artillery	.234	.224		
Engineer	.240	.122		
Mechanized	.323	.131		
Infantry	.032	.464		
Consistency Ratio	.082	.213		

Situation Number 223212 - 140

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.095			
Artillery	.196			
Engineer	.137			
Mechanized	.362			
Infantry	.208			
Consistency Ratio	.083			

Situation Number 223221 - 141

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.156			
Artillery	.531			
Engineer	.151			
Mechanized	.085			
Infantry	.074			
Consistency Ratio	1.131			

Situation Number 223222 - 142

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.078	.059	.142	.098
Artillery	.116	.324	.187	.199
Engineer	.029	.065	.071	.040
Mechanized	.188	.410	.467	.435
Infantry	.588	.140	.131	.225
Consistency Ratio	.208	.091	.086	.166

	Sample 5	Sample 6	Sample 7	Sample 8
Armor	.299	.227	.355	.064
Artillery	.090	.198	.026	.365
Engineer	.124	.172	.097	.080
Mechanized	.395	.227	.469	.123
Infantry	.090	.172	.051	.365
Consistency Ratio	.062	.054	.184	.021

	Sample 9	Sample 10	Sample 11	Sample 12
Armor	.044	.137	.121	.096
Artillery	.157	.270	.310	.167
Engineer	.084	.031	.101	.181
Mechanized	.497	.419	.121	.181
Infantry	.216	.140	.344	.372
Consistency Ratio	.063	.101	.022	.042

Situation Number 223231 - 143

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.088	.227	.052	.076
Artillery	.083	.345	.211	.264
Engineer	.027	.049	.076	.109
Mechanized	.394	.104	.489	.378
Infantry	.406	.277	.169	.170
Consistency Ratio	.140	.121	.102	.073

	Sample 5	Sample 6	Sample 7	Sample 8
Armor	.033	.131	.200	.555
Artillery	.096	.047	.200	.045
Engineer	.096	.308	.200	.097
Mechanized	.515	.218	.200	.277
Infantry	.259	.301	.200	.023
Consistency Ratio	.185	.071	.000	.230

	Sample 9	Sample 10	Sample 11	Sample 12
Armor	.050	.137	.194	.177
Artillery	.199	.053	.388	.221
Engineer	.136	.059	.105	.062
Mechanized	.116	.579	.242	.292
Infantry	.496	.170	.072	.245
Consistency Ratio	.122	.104	.074	.033

Situation Number 223232 - 144

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.381	.066		
Artillery	.397	.162		
Engineer	.068	.097		
Mechanized	.119	.293		
Infantry	.032	.400		
Consistency Ratio	.076	.154		

Situation Number 311111 - 145

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.197	.243		
Artillery	.077	.072		
Engineer	.181	.148		
Mechanized	.226	.399		
Infantry	.316	.136		
Consistency Ratio	.142	.118		

Situation Number 311112 - 146

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.109			
Artillery	.174			
Engineer	.275			
Mechanized	.354			
Infantry	.085			
Consistency Ratio	.699			

Situation Number 311121 - 147

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.060			
Artillery	.129			
Engineer	.099			
Mechanized	.392			
Infantry	.317			
Consistency Ratio	.181			

Situation Number 311122 - 148

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.606	.165		
Artillery	.056	.262		
Engineer	.083	.415		
Mechanized	.220	.059		
Infantry	.032	.097		
Consistency Ratio	.166	.286		

Situation Number 311131 - 149

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.174			
Artillery	.405			
Engineer	.068			
Mechanized	.267			
Infantry	.084			
Consistency Ratio	.322			

Situation Number 311211 - 151

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.101			
Artillery	.046			
Engineer	.346			
Mechanized	.253			
Infantry	.253			
Consistency Ratio	.155			

Situation Number 311212 - 152

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.253			
Artillery	.110			
Engineer	.191			
Mechanized	.253			
Infantry	.191			
Consistency Ratio	.117			

Situation Number 311222 - 154

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.281			
Artillery	.026			
Engineer	.054			
Mechanized	.529			
Infantry	.108			
Consistency Ratio	.310			

Situation Number 311231 - 155

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.252	.304		
Artillery	.220	.102		
Engineer	.107	.372		
Mechanized	.238	.186		
Infantry	.180	.034		
Consistency Ratio	.217	.244		

Situation Number 311232 - 156

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.416			
Artillery	.262			
Engineer	.118			
Mechanized	.163			
Infantry	.039			
Consistency Ratio	.159			

Situation Number 312111 - 157

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.260	.064		
Artillery	.243	.258		
Engineer	.176	.123		
Mechanized	.260	.136		
Infantry	.058	.416		
Consistency Ratio	.098	.322		

Situation Number 312112 - 158

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.284	.086		
Artillery	.142	.274		
Engineer	.124	.157		
Mechanized	.284	.432		
Infantry	.163	.048		
Consistency Ratio	.012	.211		

Situation Number 312121 - 159

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.582	.086		
Artillery	.107	.274		
Engineer	.058	.157		
Mechanized	.176	.432		
Infantry	.074	.048		
Consistency Ratio	.034	.211		

Situation Number 312122 - 160

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.376			
Artillery	.302			
Engineer	.063			
Mechanized	.226			
Infantry	.031			
Consistency Ratio	.153			

Situation Number 312132 - 162

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.031	.135	.213	.235
Artillery	.341	.400	.098	.235
Engineer	.297	.262	.306	.222
Mechanized	.084	.122	.231	.246
Infantry	.245	.078	.149	.059
Consistency Ratio	.047	.137	.044	.004

Situation Number 312211 - 163

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.243	.270	.139	.039
Artillery	.243	.286	.059	.127
Engineer	.243	.140	.038	.065
Mechanized	.224	.240	.353	.520
Infantry	.044	.061	.137	.246

Consistency Ratio	.004	.044	.139	.115
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	Sample 5	Sample 6	Sample 7	Sample 8
Armor	.582	.130	.091	.213
Artillery	.092	.275	.131	.098
Engineer	.048	.199	.199	.306
Mechanized	.253	.309	.531	.231
Infantry	.021	.085	.045	.149

Consistency Ratio	.312	.732	.136	.044
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	Sample 9	Sample 10	Sample 11	Sample 12
Armor	.235	.199	.072	
Artillery	.235	.199	.259	
Engineer	.222	.173	.239	
Mechanized	.246	.199	.259	
Infantry	.059	.228	.167	

Consistency Ratio	.004	.012	.062	
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Situation Number 312212 - 164

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.049	.030		
Artillery	.297	.621		
Engineer	.304	.184		
Mechanized	.140	.067		
Infantry	.208	.089		
Consistency Ratio	.133	.205		

Situation Number 312221 - 165

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.462			
Artillery	.136			
Engineer	.047			
Mechanized	.301			
Infantry	.052			
Consistency Ratio	.159			

Situation Number 312222 - 166

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.072	.438		
Artillery	.236	.188		
Engineer	.287	.096		
Mechanized	.076	.226		
Infantry	.326	.049		
Consistency Ratio	.211	.050		

Situation Number 312231 - 167

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.055			
Artillery	.029			
Engineer	.249			
Mechanized	.543			
Infantry	.121			
Consistency Ratio	.333			

Situation Number 313111 - 169

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.615	.452		
Artillery	.125	.266		
Engineer	.067	.053		
Mechanized	.157	.149		
Infantry	.035	.077		
Consistency	.116	.327		
Ratio				

Situation Number 313121 - 171

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.475	.406	.535	.462
Artillery	.052	.249	.102	.047
Engineer	.094	.244	.058	.099
Mechanized	.334	.059	.282	.300
Infantry	.042	.040	.021	.089
Consistency Ratio	.196	.090	.222	.104

	Sample 5	Sample 6	Sample 7	Sample 8
Armor	.466	.289	.515	.586
Artillery	.209	.190	.113	.058
Engineer	.069	.190	.028	.075
Mechanized	.212	.219	.287	.249
Infantry	.042	.109	.055	.030
Consistency Ratio	.037	.017	.219	.163

	Sample 9	Sample 10	Sample 11	Sample 12
Armor	.509	.487	.242	.469
Artillery	.165	.126	.425	.189
Engineer	.102	.023	.106	.116
Mechanized	.184	.310	.118	.194
Infantry	.038	.052	.106	.029
Consistency Ratio	.048	.194	.097	.050

Situation Number 313122 - 172

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.416	.381		
Artillery	.174	.219		
Engineer	.052	.092		
Mechanized	.284	.258		
Infantry	.072	.047		
Consistency Ratio	.092	.100		

Situation Number 313131 - 173

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.268			
Artillery	.132			
Engineer	.056			
Mechanized	.514			
Infantry	.028			
Consistency Ratio	.193			

Situation Number 313132 - 174

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.251			
Artillery	.313			
Engineer	.095			
Mechanized	.224			
Infantry	.109			
Consistency Ratio	.121			

Situation Number 313211 - 175

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.513			
Artillery	.114			
Engineer	.055			
Mechanized	.285			
Infantry	.030			
Consistency Ratio	.212			

Situation Number 313212 - 176

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.479			
Artillery	.143			
Engineer	.051			
Mechanized	.266			
Infantry	.060			
Consistency Ratio	.089			

Situation Number 313221 - 177

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.532			
Artillery	.032			
Engineer	.127			
Mechanized	.244			
Infantry	.062			
Consistency Ratio	.294			

Situation Number 313222 - 178

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.263			
Artillery	.036			
Engineer	.118			
Mechanized	.520			
Infantry	.060			
Consistency Ratio	.205			

Situation Number 313231 - 179

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.244			
Artillery	.322			
Engineer	.106			
Mechanized	.185			
Infantry	.140			
Consistency Ratio	.043			

Situation Number 313232 - 180

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.333			
Artillery	.031			
Engineer	.134			
Mechanized	.438			
Infantry	.061			
Consistency Ratio	.219			

Situation Number 321111 - 181

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.045	.115		
Artillery	.520	.105		
Engineer	.128	.277		
Mechanized	.142	.210		
Infantry	.162	.290		
Consistency Ratio	.065	.850		

Situation Number 321112 - 182

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.290	.057		
Artillery	.145	.447		
Engineer	.145	.242		
Mechanized	.252	.156		
Infantry	.166	.095		
Consistency Ratio	.012	.103		

Situation Number 321121 - 183

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.135			
Artillery	.380			
Engineer	.248			
Mechanized	.206			
Infantry	.028			
Consistency Ratio	.297			

Situation Number 321122 - 184

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.061			
Artillery	.026			
Engineer	.132			
Mechanized	.175			
Infantry	.603			
Consistency Ratio	.219			

Situation Number 321211 - 187

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.219	.147		
Artillery	.125	.117		
Engineer	.054	.057		
Mechanized	.219	.499		
Infantry	.381	.177		
Consistency Ratio	.035	.159		

Situation Number 321212 - 188

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.031			
Artillery	.240			
Engineer	.545			
Mechanized	.066			
Infantry	.116			
Consistency Ratio	.207			

Situation Number 321221 - 189

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.056	.100		
Artillery	.116	.209		
Engineer	.296	.069		
Mechanized	.190	.380		
Infantry	.340	.240		
Consistency Ratio	.073	.083		

Situation Number 321222 - 190

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.086			
Artillery	.124			
Engineer	.221			
Mechanized	.363			
Infantry	.204			
Consistency Ratio	.017			

Situation Number 321231 - 191

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.086			
Artillery	.124			
Engineer	.221			
Mechanized	.363			
Infantry	.204			
Consistency Ratio	.017			

Situation Number 321232 - 192

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.041			
Artillery	.320			
Engineer	.216			
Mechanized	.136			
Infantry	.284			
Consistency Ratio	.190			

Situation Number 322111 - 193

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.591	.077		
Artillery	.062	.060		
Engineer	.035	.432		
Mechanized	.214	.148		
Infantry	.095	.281		
Consistency Ratio	.134	.369		

Situation Number 322112 - 194

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.153			
Artillery	.249			
Engineer	.042			
Mechanized	.470			
Infantry	.083			
Consistency Ratio	.138			

Situation Number 322121 - 195

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.074	.060	.097	.140
Artillery	.082	.415	.356	.230
Engineer	.032	.168	.050	.043
Mechanized	.220	.168	.328	.509
Infantry	.589	.183	.166	.076
Consistency Ratio	.204	.253	.027	.257

	Sample 5	Sample 6	Sample 7	Sample 8
Armor	.024	.033	.064	.178
Artillery	.253	.122	.244	.269
Engineer	.121	.355	.181	.028
Mechanized	.058	.064	.116	.049
Infantry	.541	.424	.393	.565
Consistency Ratio	.267	.267	.040	.087

	Sample 9	Sample 10	Sample 11	Sample 12
Armor	.092	.169	.123	.079
Artillery	.218	.195	.122	.158
Engineer	.048	.169	.337	.120
Mechanized	.301	.295	.230	.267
Infantry	.339	.169	.185	.373
Consistency Ratio	.121	.012	.116	.035

Situation Number 322122 - 196

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.082			
Artillery	.414			
Engineer	.106			
Mechanized	.241			
Infantry	.155			
Consistency Ratio	.033			

Situation Number 322211 - 199

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.241	.046		
Artillery	.241	.285		
Engineer	.233	.407		
Mechanized	.241	.083		
Infantry	.041	.177		
Consistency Ratio	.000	.172		

Situation Number 322212 - 200

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.057			
Artillery	.384			
Engineer	.039			
Mechanized	.123			
Infantry	.394			
Consistency Ratio	.138			

Situation Number 322221 - 201

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.038			
Artillery	.172			
Engineer	.214			
Mechanized	.240			
Infantry	.333			
Consistency Ratio	.119			

Situation Number 322222 - 202

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.079			
Artillery	.153			
Engineer	.252			
Mechanized	.153			
Infantry	.361			
Consistency Ratio	.029			

Situation Number 322232 - 204

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.096			
Artillery	.262			
Engineer	.138			
Mechanized	.183			
Infantry	.318			
Consistency Ratio	.076			

Situation Number 323111 - 205

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.084			
Artillery	.353			
Engineer	.105			
Mechanized	.284			
Infantry	.172			
Consistency Ratio	.109			

Situation Number 323112 - 206

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.036	.141		
Artillery	.463	.458		
Engineer	.213	.048		
Mechanized	.137	.289		
Infantry	.149	.062		
Consistency Ratio	.072	.380		

Situation Number 323121 - 207

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.071	.317		
Artillery	.393	.221		
Engineer	.134	.069		
Mechanized	.274	.336		
Infantry	.126	.054		
Consistency Ratio	.091	.073		

Situation Number 323122 - 208

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.060			
Artillery	.498			
Engineer	.080			
Mechanized	.231			
Infantry	.129			
Consistency Ratio	.081			

Situation Number 323131 - 209

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.078			
Artillery	.411			
Engineer	.080			
Mechanized	.280			
Infantry	.148			
Consistency Ratio	.118			

Situation Number 323132 - 210

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.460	.350		
Artillery	.189	.191		
Engineer	.161	.029		
Mechanized	.129	.371		
Infantry	.059	.057		
Consistency Ratio	.054	.120		

Situation Number 323211 - 211

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.529	.543		
Artillery	.153	.190		
Engineer	.063	.028		
Mechanized	.209	.179		
Infantry	.043	.057		
Consistency Ratio	.088	.149		

Situation Number 323212 - 212

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.472			
Artillery	.167			
Engineer	.123			
Mechanized	.203			
Infantry	.032			
Consistency Ratio	.076			

Situation Number 323221 - 213

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.105			
Artillery	.262			
Engineer	.128			
Mechanized	.319			
Infantry	.183			
Consistency Ratio	.053			

Situation Number 323222 - 214

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Restricts Vehicles*

"IDEAL" TASK ORGANIZATION

	Sample 1	Sample 2	Sample 3	Sample 4
Armor	.080			
Artillery	.313			
Engineer	.039			
Mechanized	.193			
Infantry	.372			
Consistency Ratio	.027			

Situation Number 111122 - 4

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Urban (predominantly level)**
4. Visibility - **Unlimited**
5. Average Engagement Window - **1 km to 3 km**
6. Trafficability - **Restricts Vehicles**

Situation Number 112221 - 21

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Mountainous**
4. Visibility - **Reduced**
5. Average Engagement Window - **1 to 3 km**
6. Trafficability - **Supports Vehicles**

Situation Number 113111 - 25

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Flat to Rolling**
4. Visibility - **Unlimited**
5. Average Engagement Window - **3 km or greater**
6. Trafficability - **Supports Vehicles**

Situation Number 113132 - 30

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Flat to Rolling**
4. Visibility - **Unlimited**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Restricts Vehicles**

Situation Number 113221 - 33

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Flat to Rolling**
4. Visibility - **Reduced**
5. Average Engagement Window - **1 km to 3 km**
6. Trafficability - **Supports Vehicles**

Situation Number 113222 - 34

1. Brigade Mission - **Attack**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Flat to Rolling**
4. Visibility - **Reduced**
5. Average Engagement Window - **1 km to 3 km**
6. Trafficability - **Restricts Vehicles**

Situation Number 121131 - 41

1. Brigade Mission - **Attack**
2. Threat Force - **Infantry**
3. Terrain - **Urban (predominantly level)**
4. Visibility - **Unlimited**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Supports vehicles**

Situation Number 122112 - 50

1. Brigade Mission - **Attack**
2. Threat Force - **Infantry**
3. Terrain - **Mountainous**
4. Visibility - **Unlimited**
5. Average Engagement Window - **3 km or greater**
6. Trafficability - **Restricts Vehicles**

Situation Number 122121 - 51

1. Brigade Mission - **Attack**
2. Threat Force - **Infantry**
3. Terrain - **Mountainous**
4. Visibility - **Unlimited**
5. Average Engagement Window - **1 km to 3 km**
6. Trafficability - **Supports Vehicles**

Situation Number 122211 - 55

1. Brigade Mission - **Attack**
2. Threat Force - **Infantry**
3. Terrain - **Mountainous**
4. Visibility - **Reduced**
5. Average Engagement Window - **3 km or greater**
6. Trafficability - **Supports Vehicles**

Situation Number 122221 - 57

1. Brigade Mission - **Attack**
2. Threat Force - **Infantry**
3. Terrain - **Mountainous**
4. Visibility - **Reduced**
5. Average Engagement Window - **1 to 3 km**
6. Trafficability - **Supports Vehicles**

Situation Number 123121 - 63

1. Brigade Mission - **Attack**
2. Threat Force - **Infantry**
3. Terrain - **Flat to Rolling**
4. Visibility - **Unlimited**
5. Average Engagement Window - **1 to 3 km**
6. Trafficability - **Supports Vehicles**

Situation Number 123131 - 65

1. Brigade Mission - **Attack**
2. Threat Force - **Infantry**
3. Terrain - **Flat to Rolling**
4. Visibility - **Unlimited**
5. Average Engagement Window - **less than 1 km**
6. Trafficability - **Supports Vehicles**

Situation Number 123211 - 67

1. Brigade Mission - **Attack**
2. Threat Force - **Infantry**
3. Terrain - **Flat to Rolling**
4. Visibility - **Reduced**
5. Average Engagement Window - **3 km or greater**
6. Trafficability - **Supports Vehicles**

Situation Number 211121 - 75

1. Brigade Mission - **Defend**
2. Threat Force - **Mechanized Infantry/Armor**
3. Terrain - **Urban (predominantly level)**
4. Visibility - **Unlimited**
5. Average Engagement Window - **1 km to 3 km**
6. Trafficability - **Supports Vehicles**

Situation Number 211122 - 76

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Restricts Vehicles*

Situation Number 211221 - 81

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

Situation Number 212122 - 88

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Restricts Vehicles*

Situation Number 212131 - 89

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

Situation Number 212132 - 90

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

Situation Number 213131 - 101

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

Situation Number 213221 - 105

1. Brigade Mission - *Defend*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

Situation Number 222111 - 121

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Supports Vehicles*

Situation Number 222231 - 131

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

Situation Number 223122 - 136

1. Brigade Mission - *Defend*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *1 to 3 km*
6. Trafficability - *Restricts Vehicles*

Situation Number 311132 - 150

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

Situation Number 311221 - 153

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Reduced*
5. Average Engagement Window - *1 km to 3 km*
6. Trafficability - *Supports Vehicles*

Situation Number 312131 - 161

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

Situation Number 312232 - 168

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

Situation Number 313112 - 170

1. Brigade Mission - *Delay*
2. Threat Force - *Mechanized Infantry/Armor*
3. Terrain - *Flat to Rolling*
4. Visibility - *Unlimited*
5. Average Engagement Window - *3 km or greater*
6. Trafficability - *Restricts Vehicles*

Situation Number 321131 - 185

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports vehicles*

Situation Number 321132 - 186

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Urban (predominantly level)*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

Situation Number 322131 - 197

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

Situation Number 322132 - 198

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Unlimited*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

Situation Number 322231 - 203

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Mountainous*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

Situation Number 323231 - 215

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Supports Vehicles*

Situation Number 323232 - 216

1. Brigade Mission - *Delay*
2. Threat Force - *Infantry*
3. Terrain - *Flat to Rolling*
4. Visibility - *Reduced*
5. Average Engagement Window - *less than 1 km*
6. Trafficability - *Restricts Vehicles*

APPENDIX D. INFLUENCE FACTOR SURVEY RESULTS

	PILOT			
	.250	.250	.250	.250
	.250	.250	.250	.250
	.250	.250	.250	.250
	.250	.250	.250	.250
Consistency Ratios	.000	.000	.000	.000
	Survey Response 1			
	.094	.242	.120	.143
	.124	.114	.208	.460
	.163	.527	.069	.240
	.619	.117	.602	.158
Consistency Ratios	.176	.039	.115	.030
	Survey Response 2			
	.655	.064	.065	.121
	.154	.647	.154	.155
	.070	.108	.652	.070
	.121	.181	.129	.655
Consistency Ratios	.080	.068	.114	.012
	Survey Response 3			
	.050	.463	.071	.101
	.442	.154	.413	.054
	.083	.078	.277	.552
	.425	.304	.239	.293
Consistency Ratios	.066	.128	.189	.067
	Survey Response 4			
	.056	.085	.080	.254
	.634	.203	.261	.043
	.053	.668	.044	.627
	.257	.043	.615	.076
Consistency Ratios	.160	.147	.221	.223
	Survey Response 5			
	.247	.083	.172	.215
	.152	.521	.172	.087
	.052	.073	.190	.051
	.549	.323	.466	.647
Consistency Ratios	.070	.085	.299	.210

APPENDIX E. "SUPERMATRIX"

	PREPARATION TIME INCREMENTS							(Hours)
	0-6	>6-12	>12-18	>18-24	>24-48	>48-72	>72-168	
PREP								3Dy-1Wk
0-6	1.000	0.000	0.000	0.000	0.000	0.000	0.000	
>6-12	0.000	1.000	0.000	0.000	0.000	0.000	0.000	
>12-18	0.000	0.000	1.000	0.000	0.000	0.000	0.000	
>18-24	0.000	0.000	0.000	1.000	0.000	0.000	0.000	
>24-48	0.000	0.000	0.000	0.000	1.000	0.000	0.000	
>48-72	0.000	0.000	0.000	0.000	0.000	1.000	0.000	
>72-168	0.000	0.000	0.000	0.000	0.000	0.000	1.000	
>168-720	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
				W(11)				
LOG								
100-90	0.526	0.488	0.469	0.458	0.450	0.450	0.428	
<90-80	0.272	0.286	0.293	0.299	0.301	0.286	0.298	
<80-70	0.128	0.130	0.138	0.143	0.153	0.161	0.163	
<70-60	0.051	0.069	0.073	0.072	0.065	0.069	0.073	
<60	0.022	0.025	0.026	0.028	0.031	0.033	0.038	
				W(21)				
CONT								
0-12	0.022	0.028	0.031	0.041	0.049	0.041	0.077	
>12-18	0.031	0.034	0.037	0.048	0.061	0.051	0.093	
>18-24	0.044	0.042	0.047	0.051	0.068	0.056	0.103	
>24-36	0.075	0.070	0.075	0.070	0.080	0.066	0.107	
>36-48	0.130	0.127	0.123	0.101	0.102	0.085	0.118	
>48-72	0.242	0.244	0.239	0.260	0.220	0.174	0.147	
>72	0.456	0.455	0.448	0.430	0.421	0.289	0.355	
				W(31)				
EXP/TRN								
ROOKIE	0.038	0.045	0.046	0.051	0.061	0.081	0.095	
NEW	0.101	0.106	0.113	0.113	0.119	0.140	0.160	
WELL	0.242	0.224	0.229	0.235	0.234	0.260	0.278	
VETERAN	0.619	0.624	0.612	0.601	0.587	0.520	0.467	
				W(41)				

PREP TIME		LOGISITICS LEVELS			(Percents)	
	168-720 1Wk-1Mo	100-90	<90-80	<80-70	<70-60	<60
PREP						
0-6	0.000	0.068	0.036	0.016	0.014	0.013
>6-12	0.000	0.077	0.044	0.027	0.022	0.022
>12-18	0.000	0.081	0.068	0.042	0.035	0.033
>18-24	0.000	0.097	0.089	0.071	0.058	0.058
>24-48	0.000	0.126	0.115	0.101	0.099	0.095
>48-72	0.000	0.149	0.163	0.142	0.140	0.138
>72-168	0.000	0.187	0.218	0.239	0.232	0.230
>168-720	1.000	0.215	0.266	0.361	0.401	0.412
				W(12)		
LOG						
100-90	0.414	1.000	0.000	0.000	0.000	0.000
<90-80	0.311	0.000	1.000	0.000	0.000	0.000
<80-70	0.149	0.000	0.000	1.000	0.000	0.000
<70-60	0.079	0.000	0.000	0.000	1.000	0.000
<60	0.048	0.000	0.000	0.000	0.000	1.000
				W(22)		
CONT						
0-12	0.108	0.040	0.031	0.023	0.017	0.015
>12-18	0.115	0.048	0.039	0.033	0.029	0.026
>18-24	0.127	0.055	0.051	0.048	0.045	0.040
>24-36	0.140	0.074	0.073	0.078	0.075	0.061
>36-48	0.140	0.115	0.119	0.113	0.123	0.133
>48-72	0.171	0.224	0.224	0.236	0.233	0.238
>72	0.200	0.445	0.463	0.469	0.479	0.486
				W(32)		
EXP/TRN						
ROOKIE	0.151	0.209	0.170	0.123	0.056	0.043
NEW	0.199	0.248	0.203	0.193	0.132	0.110
WELL	0.281	0.248	0.286	0.325	0.241	0.220
VETERAN	0.370	0.295	0.341	0.359	0.572	0.628
				W(42)		

CONTINUOUS OPERATIONS INCREMENTS

(Hours)

	0-12	>12-18	>18-24	>24-36	>36-48	>48-72	>72
PREP							
0-6	0.026	0.022	0.017	0.016	0.016	0.014	0.012
>6-12	0.035	0.028	0.027	0.026	0.023	0.025	0.019
>12-18	0.045	0.040	0.039	0.035	0.034	0.032	0.029
>18-24	0.061	0.053	0.049	0.049	0.046	0.046	0.051
>24-48	0.085	0.088	0.085	0.082	0.078	0.079	0.077
>48-72	0.121	0.131	0.129	0.131	0.131	0.130	0.133
>72-168	0.221	0.230	0.223	0.220	0.226	0.227	0.231
>168-720	0.405	0.408	0.430	0.441	0.446	0.447	0.447
				W(13)			
LOG							
100-90	0.466	0.465	0.451	0.493	0.491	0.551	0.554
<90-80	0.282	0.281	0.307	0.279	0.287	0.252	0.263
<80-70	0.139	0.138	0.140	0.127	0.133	0.102	0.100
<70-60	0.076	0.080	0.069	0.073	0.064	0.069	0.053
<60	0.037	0.035	0.032	0.029	0.025	0.026	0.030
				W(23)			
CONT							
0-12	1.000	0.000	0.000	0.000	0.000	0.000	0.000
>12-18	0.000	1.000	0.000	0.000	0.000	0.000	0.000
>18-24	0.000	0.000	1.000	0.000	0.000	0.000	0.000
>24-36	0.000	0.000	0.000	1.000	0.000	0.000	0.000
>36-48	0.000	0.000	0.000	0.000	1.000	0.000	0.000
>48-72	0.000	0.000	0.000	0.000	0.000	1.000	0.000
>72	0.000	0.000	0.000	0.000	0.000	0.000	1.000
				W(33)			
EXP/TRN							
ROOKIE	0.209	0.170	0.123	0.095	0.068	0.052	0.039
NEW	0.248	0.203	0.193	0.160	0.108	0.107	0.089
WELL	0.248	0.286	0.325	0.278	0.235	0.234	0.221
VETERAN	0.295	0.341	0.359	0.467	0.590	0.606	0.651
				W(43)			

EXPERIENCE AND TRAINING LEVELS

	ROOKIE	NEW	WELL	VETERAN
PREP				
0-6	0.030	0.024	0.017	0.012
>6-12	0.035	0.031	0.024	0.020
>12-18	0.048	0.039	0.039	0.031
>18-24	0.052	0.057	0.048	0.047
>24-48	0.077	0.075	0.072	0.076
>48-72	0.142	0.128	0.134	0.121
>72-168	0.197	0.221	0.216	0.254
>168-720	0.418	0.426	0.452	0.439

W(14)

LOG				
100-90	0.516	0.492	0.455	0.459
<90-80	0.289	0.277	0.296	0.264
<80-70	0.116	0.137	0.145	0.164
<70-60	0.053	0.067	0.073	0.078
<60	0.026	0.027	0.030	0.034

W(24)

CONT				
0-12	0.016	0.024	0.030	0.047
>12-18	0.026	0.033	0.042	0.051
>18-24	0.044	0.046	0.069	0.070
>24-36	0.077	0.082	0.083	0.084
>36-48	0.129	0.150	0.141	0.140
>48-72	0.245	0.234	0.211	0.230
>72	0.463	0.431	0.424	0.378

W(34)

EXP/TRN				
ROOKIE	1.000	0.000	0.000	0.000
NEW	0.000	1.000	0.000	0.000
WELL	0.000	0.000	1.000	0.000
VETERAN	0.000	0.000	0.000	1.000

W(44)

APPENDIX F. FACTOR LEVELS

SURVEY PARTICIPANTS

PREP	PILOT	1	2	3	4	5
0-6	0.007	0.005	0.005	0.002	0.004	0.006
>6-12	0.009	0.006	0.007	0.003	0.005	0.008
>12-18	0.011	0.008	0.009	0.004	0.008	0.010
>18-24	0.016	0.010	0.012	0.005	0.010	0.013
>24-48	0.023	0.015	0.017	0.008	0.015	0.018
>48-72	0.034	0.021	0.027	0.011	0.025	0.025
>72-Wk	0.056	0.034	0.044	0.017	0.044	0.037
>Wk-Mo	0.096	0.056	0.078	0.029	0.081	0.055
SUBTOTAL	0.250	0.155	0.199	0.080	0.194	0.173

LOG						
100-90	0.119	0.122	0.145	0.195	0.086	0.120
<90-80	0.071	0.071	0.086	0.109	0.053	0.069
<80-70	0.035	0.036	0.042	0.050	0.027	0.032
<70-60	0.017	0.018	0.021	0.026	0.013	0.017
<60	0.008	0.008	0.010	0.012	0.006	0.008
SUBTOTAL	0.250	0.255	0.304	0.392	0.186	0.246

CONT						
<12	0.010	0.010	0.008	0.012	0.003	0.010
>12-18	0.012	0.012	0.010	0.014	0.003	0.013
>18-24	0.016	0.015	0.012	0.019	0.004	0.018
>24-36	0.022	0.021	0.016	0.026	0.006	0.023
>36-48	0.033	0.032	0.025	0.042	0.008	0.038
>48-72	0.056	0.057	0.043	0.075	0.014	0.063
>72+	0.101	0.110	0.081	0.145	0.026	0.113
SUBTOTAL	0.250	0.258	0.195	0.333	0.064	0.278

EXP/TRN						
ROOKIE	0.029	0.030	0.039	0.019	0.067	0.035
NEW	0.041	0.047	0.054	0.029	0.096	0.050
WELL	0.065	0.084	0.079	0.049	0.146	0.078
VETERAN	0.116	0.171	0.130	0.098	0.247	0.141
SUBTOTAL	0.250	0.332	0.302	0.195	0.556	0.303

TOTAL	1.000	1.000	1.000	1.000	1.000	1.000

APPENDIX G. TASK ORGANIZATION SURVEY COMMENTS AND RECOMMENDATIONS

I. Pertinent Comments

Answers to the Question: If you found this questionnaire difficult to understand or complete, please describe the problems you encountered.

"OK, I assume that being a commander is the same as being an operational officer."

"Abstract in scenario description; draw a picture or sketch."

"Instructions a bit laborious; define terms, i.e. restricts vehicles, reduced... Lots of scenarios and combinations changes.... gets tiring; not sure the scale's subtle variations mean much."

"Example: Situation 223231-141, terrain equals flat to rolling but visibility is reduced and engagement window is 1 km. What reduces visibility? fog, vegetation, answer could effect task organization."

"Questions used engineer company as part of Brigade Task Force. Recommend changing to an Engineer Battalion or "E-Force" mix as used in Europe and Southwest Asia."

"Only difficulty is that I have no recent operational experience with tactical units."

II. Recommendations

Based primarily upon the comments above, the following recommendations are made to improve the quality of the surveys.

Cover Page, Paragraph 2. Eliminate third paragraph.

Section II.B.5. "Average Engagement Window", add the phrase "due to terrain, vegetation or structures".

Section II.B.6. "Area Trafficability", add the phrase "due to terrain, vegetation or structures".

Section IV. "BRANCH" include Special Forces and Aviation.

Section IV. Eliminate request for information concerning CAREER DUTY LOCATIONS.

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