ARI Research Note 92-78

ACCES Assessment of Command and Control During a Division-Level CPX, Summer 1991

(ACCES Application 91-02)

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ACCES ASSESSMENT OF COMMAND AND CONTROL DURING A DIVISION-LEVEL CPX, SUMMER 1991 (ACCES APPLICATION 91-02)

EXECUTIVE SUMMARY

This report presents the results of an assessment of command and control (C2) during a 5-day division-level command post exercise (CPX) conducted during the summer of 1991 as part of the Battle Command Training Program (BCTP). The CPX involved the division headquarters, two maneuver brigade headquarters organic to the division, and a separate reserve component "round out" brigade headquarters.

The Army Command and Control Evaluation System (ACCES) methodology, developed by the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) Field Unit at Fort Leavenworth, Kansas, was the tool used in the assessment.

The ACCES team for the CPX included 14 government (military and civilian) and contractor observer personnel located in the command posts (CPs) of the division, one organic brigade, and the exercise control center. The data collection and subsequent analysis efforts focused on addressing the 256 measures used in the enhanced ACCES methodology to assess the effectiveness of the unit's command and control (C2) processes. As with all ACCES applications, it must be kept in mind that the conclusions presented are based on a sampling of the C2 actions during the exercise; the small number of data collectors are strictly enjoined not to disrupt the training. The combination of relatively inexperienced observers and new ACCES measures and data collation sheets led to problems in collecting sufficient, applicable data to address all measures adequately.

Analysis of the available data shows that the C2 processes evaluated did not support the division and its subordinate units to the extent required for success. The division staff was relatively experienced (8 to 10 months time in assigned positions for most personnel) but had some problems working together to analyze courses of action and develop plans that provided the flexibility necessary to succeed in the face of unexpected enemy reactions to division initiatives. As the exercise progressed, C2 continued to deteriorate, at least partially because of late and/or incomplete friendly and enemy status reports on which the staff depended for planning and analysis. Directive preparation was delayed, and only 20% of the directives were issued early enough to be fully implemented at the intended time.

Division plans remained in effect for a median of only 4.2 hours, and only 10% of the plans implemented survived for their intended time durations. Contributing to this lack of stability was the fact that the division included no contingencies in the plans it developed during the exercise. Overly optimistic estimations by the staff of the mission accomplishment may have contributed to the lack of contingency planning and the lack of plan stability. The division initially assumed the offensive but was twice forced on the defensive and spent the last 31 hours of the exercise in a defensive posture. The second time the division went on the defensive, the action was driven by a decision of the exercise director that the division had achieved its training objectives in offensive operations.

On the positive side, the CPs throughout the division coordinated well with each other to ensure that actions were harmonized. Cells within CPs also coordinated their actions and information well. No incidents were noted where information disseminated or actions taken by one CP conflicted with those of another. Directives issued were generally clear, and little time was taken by subordinate units requesting clarification or additional information.

ACCES ASSESSMENT OF COMMAND AND CONTROL DURING A DIVISION-LEVEL CPX, SUMMER 1991 (ACCES APPLICATION 91-02)

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ACCES ASSESSMENT OF COMMAND AND CONTROL DURING A DIVISION-LEVEL CPX, SUMMER 1991 (ACCES APPLICATION 91-02)

Chapter I. OVERVIEW

Introduction

This report is the second in a series of assessments of command and control (C2) during division-level command post exercises (CPXs) in 1991 (ACCES application 91-02). The Army Command and Control Evaluation System (ACCES) methodology was used as the basis for this assessment. ACCES is part of a program of the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI), Fort Leavenworth Field Unit, to develop methodologies for measuring staff performance at the individual and group level.

Background

ACCES' purpose is to provide indicators of the effectiveness of C2 at various levels. Traditional force effectiveness measures do not adequately evaluate C2 performance because they address the headquarters primarily in terms of the success of its subordinates' efforts. Measuring the effectiveness of a headquarters staff requires an understanding of the processes the staff performs to support and enhance the performance of subordinate elements and accomplish military missions. Under the sponsorship of the Combined Arms Command–Combat Development, the ARI Field Unit at Fort Leavenworth has addressed this need through the development of ACCES.

Over the past three years, the evolving ACCES methodology has provided the framework to measure quantitatively how well staff processes are performed. During command post exercises (CPX) and field training exercises (FTX), commanders and staffs are given the opportunity to practice their C2 functions in varying tactical environments and situations. Feedback based on ACCES observations and measures is intended to provide to commanders and staffs assistance in honing their abilities to function as an effective C2 team.

On-going ACCES methodology enhancement efforts include bringing ACCES measures into synchronization with Army doctrinal tasks and standards and refining the data collection and analysis procedures.

Army Command and Control Evaluation System

ACCES is based on the view that a headquarters staff is analogous to an adaptive control system that seeks to influence key elements of the environment by means of the plans it develops and directives it issues to its subordinates. This view implies that the overall effectiveness of the headquarters can be judged by the viability of its plans. Good plans can be executed without need for modification beyond the contingencies built into them and will remain in effect throughout their intended lives. By contrast, less viable plans, in decreasing order of effectiveness, will

- require minor adjustments in the course of their execution, without change to the basic plan;

- require execution of a contingency, significantly different from the intended course of action, but provided for in the initial plan; or

- require cancellation and issuance of an entirely new plan.

The overall ACCES measures of headquarters effectiveness address primarily the extent to which plans remain in effect for their intended periods, without the need for unanticipated changes in the plans. Secondarily, ACCES addresses the timeliness of the process that produces those plans. Headquarters that receive high scores under ACCES are those which issue plans (including missions, assets, boundaries, and schedules) which include contingencies and which allow subordinate commanders adequate time to do their own planning and preparation prior to execution.

ACCES also provides diagnostic scores for the quality of processes by which military functions are performed. The measurement tool treats the headquarters as an adaptive control system operating in control cycles that seek to keep key features of the environment within expected boundaries. The control cycle is used in ACCES as an organizing device around which to build descriptions of the information transformation processes engaged in by a staff and the decision maker, from the acquisition of data to the issuance of plans and orders.

The ACCES model, as shown in Figure 1, is very similar to the C2 process described in FM 101-5 and other Army doctrinal publications. In Figure 1 the titles in italics (outside the boundaries of the C2 process elements) are those of the related categories into which the ACCES effectiveness measures are grouped. The nine categories of measures (*Information Handling* is separated into *Incoming* and *Outgoing*) are described in detail in Chapter III (Assessment of the Division's C2), beginning on page 9.

The primary focus of ACCES is on the performance of command centers from brigade through corps level at various stages of the planning process, from the collection of data through the development and implementation of plans. However, in order to provide a complete evaluation of division C2, ACCES also looks at the performance of individual functional cells and the interactions among the cells. The general approach is built around the following concepts:

- A staff (or a single staff element or a network of staffs) is conceptualized as an adaptive system seeking to control key features of the environment.

- The environment consists of other commanders and their staffs, plus the elements of METT-T [mission(s), enemy, troops, terrain, and time available].

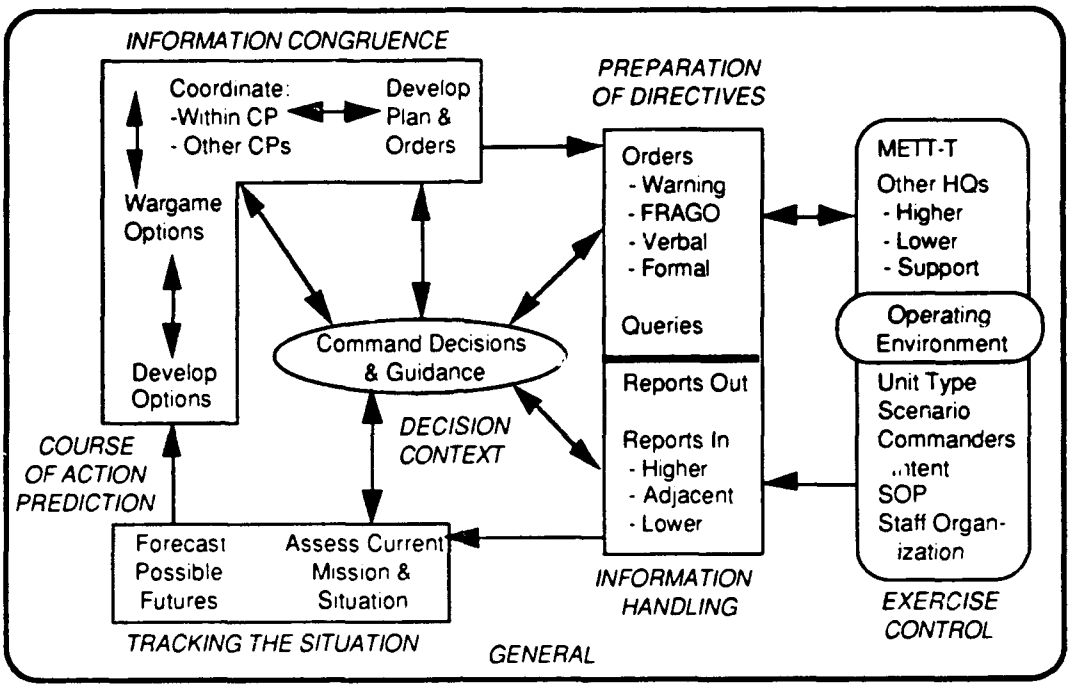


Figure 1. ACCES Command and Control Model

- The staff is understood to engage in a number of processes in order to support decision making and implementation:

- collecting information through monitoring the environment,
- inquiring (seeking information),
- synthesizing information,
- developing and evaluating alternatives,
- reviewing recommended courses of action,
- implementing plans,
- coordinating, and
- disseminating information in messages and reports.

As a result of these processes, several different types of products are generated:

- information about the environment;
- an initial understanding of the situation;
- estimates of the situation, including a set of alternative courses of action, their expected results, and consequent recommendations;
- decisions by the commander (or, in some cases, the staff acting for the commander);
- inquiries (for information);
- reports that inform others, including answers to incoming queries;
- command guidance; and
- plans/directives.

The concepts upon which ACCES is built assume that effective staffs look ahead in time and develop plans that are robust (i.e., plans that will support mission accomplishment despite changes in the elements of METT-T). ACCES includes over 250 measures of performance, grouped into the major categories shown in Figure 1.

Chapter II. DESCRIPTION OF THE ACCES APPLICATION

Introduction

This chapter describes the characteristics of the exercise, including pertinent information about the unit and the exercise conduct, and outlines the ACCES data collection effort.

Characteristics of the Exercise

Information in this paragraph is taken from data gathered to address measures in the Exercise Control (xE) category. A complete description of the measures in this category and the results of data analysis can be found in Appendix A.

Exercise conditions. This was a command post exercise (CPX) conducted in a field environment with tactical operations centers of the division headquarters and the maneuver brigades deployed in the field. Besides the division headquarters, three brigades participated, two organic and one separate brigade. Higher headquarters (corps) was represented by the commander and primary staff, while adjacent headquarters were represented by response cells. Opposing forces were played from Ft. Leavenworth, KS. The Joint Exercise Simulation System (JESS) was used to determine outcomes of events in the exercise.

Exercise phases. The CPX was conducted over a five day period. Operational phases of the exercise are depicted in Figure 2. As shown in Figure 2, the division initially assumed the offensive, but was forced into a

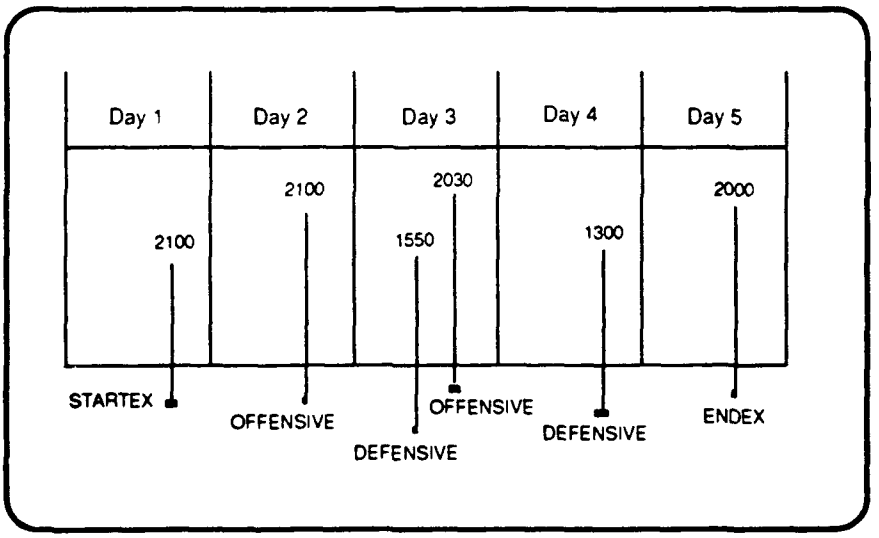


Figure 2. Exercise Phases

defensive posture twice and remained on the defensive during the last 31 hours of the exercise. The last time the division assumed a defensive posture the action was driven primarily by pre-established training objectives for the exercise. The Exercise Director determined that the division had achieved its training objectives in offensive operations and influenced the scenario to place them back on the defensive. This artificiality may have contributed to the apparent problems the division had in executing its plans, but specific examples of this cannot be found in the data collected by the ACCES observers. The division was in an offensive posture for 35.3 hours, or 37% of the exercise time. A detailed exercise summary and an event timeline are included at Appendix B.

Unit experience. The division had spent 6-7 months in field training during the 24 months prior to the exercise, with the last field training exercise (FTX) occurring two months ago. Immediate staff members (assistant commanders, Chief of Staff, and principal general and special staff members) had been with the unit a median length of time of ten months.

Combat Intensity and Workload. The exercise scenario included high intensity combat against a very capable opposing force. The unit planned its staff shift changes every twelve hours, but commanders and principal staff members were observed to work far beyond their scheduled shift times.

Automation and Communications Support. The unit was equipped with Apple computers tied in with an Air Force intelligence system (i.e., AC2SMAN), as an automated aid to planning and support, and the Mobile Subscriber Equipment (MSE) for area communications.

ACCES Data Collection

A combined team of 14 military and civilian (government and contractor) observer personnel collected and collated data from the exercise. Observers were located at three staff sections in the division main command post (DMAIN): plans, current operations, and intelligence. An observer was also located in each of the following: the division tactical command post (DTAC), the division rear command post (DREAR), an organic maneuver brigade command post (Bde CP), and the exercise control center. The ACCES methodology had undergone significant revision during the previous year, and the measures addressed in this report had been used in only one previous exercise. The data collation sheets used (ACCES version 91–1) had also been used only once before, and problems found in them during the first application were not corrected in time for this exercise. The combination of new ACCES measures and unrevised data collation sheets led to shortfalls in observer proficiency and problems in collecting sufficient, applicable data to address all measures adequately.

It is important to recognize that gaps in data collection are not due solely to the level of experience of the observers and to the stage of maturation of the particular version of ACCES applied. In applying ACCES (i.e., in collecting data in the field during a unit's CPX) we must be very sensative to the purpose of the exercise (command and staff training) and must make a conscious trade-off between the quantity of data collected *vs.* the danger of interfering with the exercise. Part of the success of ACCES is due to the fact that it does allow useful data to be collected with only six or seven observers per shift, and to the fact that the observers merely observe; they do not ask questions about the actions they observe nor do they ask for explanations of actions not taken. The result of having a limited number of observers who do not interfere in the ongoing process is that we capture only some fraction of the total picture, even with the most experienced observers. Even though having relatively inexperienced observers undoubtedly decreases the size and quality of the data set we obtain, we recognize that there are some ACCES measures for which adequate data may never be obtained, even under the most ideal circumstances. One of the objectives of this phase of the ACCES development project is to identify and purge "nice-to-have-but-impractical-to-obtain" measures.

Chapter III. ASSESSMENT OF THE DIVISION'S C2

Introduction

This chapter provides indicators of the effectiveness of the division's C2 as measured by ACCES.

ACCES scores were computed directly from the information entered by the observers on ACCES data collation sheets. Where there were gaps in the data collected, ACCES analysts made efforts to fill them by consulting observers' notes, related data sheets, and (where possible) the observers themselves. Ground truth, with which to compare perceptions in command posts and cells, was derived primarily from data collected at Exercise Control.

From the computations, ACCES scoring sheets for each measure were prepared (Appendix C). For most measures these sheets include the sample size, explanation of any samples that degraded the score, and the ACCES scores for the measure.

ACCES scores are of three types:

- Values expressed on a 0-100 scale that are either percentages or values obtained by weighting "goodness" to fit a 0-100 scale.
- Time measures, where the score is normally the median value of times in the sample.
- Counts of the number of options considered, number of planners involved, etc.

The ACCES measures whose scores are represented on a 0-100 scale are generally defined so that a 0 is "worst" and 100 is "best." The time scores, are normally median times stated in minutes or hours. Time scores may increase or decrease in "goodness" with increases in value, as long time periods are good in some cases (e.g., lead time for planning) and bad in others (e.g., time delays in disseminating information). Median values presented throughout the report are arrived at as follows:

(1) For samples with an odd number (N_0) of observations, the median is the value of observation Number $[(N_0 - 1)/2 + 1]$, when the observations in the sample are arranged in ascending order of value from observation Number 1 to Number N_0.

(2) For samples with an even number (N_E) of observations, the median is halfway between the values of Number $N_E/2$ and Number $N_E/2+1$, when the observations in the sample are arranged in ascending order of value from observation Number 1 to Number N_E.

(3) For medians involving time intervals, zero values were not included in the computation.

Presentation of Results

ACCES measures are grouped into nine major categories: General; Information Handling (Incoming); Tracking the Situation; Information Congruence; Course of Action Prediction; Preparation of Directives; Information Handling (Outgoing); Decision Context; and Exercise Factors. Each category includes primary and subordinate measures. In some cases the subordinate measures are sub-elements of the primary measures, while in other cases they are related to the primary measures but are stated in different terms and cannot be directly "rolled-up" into the primary measures.

Results are presented in this chapter by measure categories, with an overall summary of the division's C2 performance in each category. Within each category, quantitative results are presented for the primary measures and for those significant subordinate measures that cannot (or should not) be rolled up into the primary measures. Narrative comments are included where scores for individual measures are important to understanding the overall C2 performance or the results in that particular category. Values for all primary and subordinate measures are presented in Appendix A. Appendix C provides raw, unreduced data for those cases where access to raw scoring data may be informative to the reader. For example, for measures where only median values are presented in the body of the report and in Appendix A, the raw data from which the medians were calculated are presented in Appendix C.

In interpreting the tabled values for the various measures, it is important to note that many of the values are based on relatively few observations. Thus, percentage values are followed by brackets [ ] which contain the values of the numerator and denominator used to calculate the percentage. Values which are medians are followed by irregular brackets { } which contain the total number of observations in that cell and the number of those observations which were zero in value. As discussed above, it is also important to note that the values presented are based on the observations made; they represent only a sample of the total actions of the division staff. Thus, for example, the statement that "there were five formal situation assessments made during day 2 of the exercise" should be interpreted to read: "there were five formal situation assessments during day 2 of the exercise which ACCES observers heard and recorded in sufficient detail to be able to describe on the relevant data sheet."

Results

In general, the Command and Control (C2) processes evaluated during this exercise did not support the division and its subordinate units to the extent needed for battlefield success. The division staff's apparent lack of experience in working as a team adversely affected its abilities to formulate plans containing contingencies, develop sufficient numbers of courses of action (COA), and assess the enemy's reaction to the division's initiatives. The staff frequently failed to aggressively pursue overdue incoming reports and accepted incomplete reports from subordinate units, which resulted in a progressive weakening of the C2 process. The division commander was actively involved in most decisions throughout the exercise.

The high percentage of late friendly situation reports (SITREPs) and late intelligence summaries (INTSUMs) as depicted in Tables 7 and 8 (page 18), respectively, slowed the planning process and contributed to the low number of directives that could be fully implemented on time (Table 37, page 41). The staff's failure to develop more than two COAs (Table 28, page 35) and to predict accurately the consequences of those COAs limited the commander in his options for decisions.

The remainder of this report contains the descriptions, scores, and associated comments pertaining to each ACCES category, primary measures, and selected subordinate measures based on the observations at this exercise. As previously stated, complete tabulations of ACCES results are in Appendix A.

Category G: General Measures This category addresses the planning process within the division and assesses the effectiveness of the products of that process. Measures include planning cycle times under varying degrees of urgency; the percentage of plans developed through unit initiative, as opposed to those developed in response to enemy actions; the length of time plans remained in effect without change; the percentage of plans that could be executed without change; and the percentage that could be executed successfully, either with or without changes.

The terms "plans" and "directives" are used in all measures in this category. As shown in Figure 3, plans comprise the four elements of Mission, Task Organization, Schedule, and Boundaries. Plans are implemented by directives, which also describe plans to those tasked to implement them. A directive, by definition, contains some or all elements of the plan it implements and may take any one of several forms, written or verbal, formal or informal.

Results for these measures and others throughout the report are presented by exercise day, Day 1 being the period from the start of the exercise (2100) until the first midnight, Day 2 being the next 24 hour period, and so on. Day 5 includes the time from 0001 on Day 5 until exercise termination (2000). Local time is used for all data recording unless otherwise specified. ACCES scores are presented for the individual command posts (CPs) at division and brigade levels. A combined score for a CP for the 5 days of the exercise is designated as "Aggregate," while a combined score for all CPs is designated as "All."

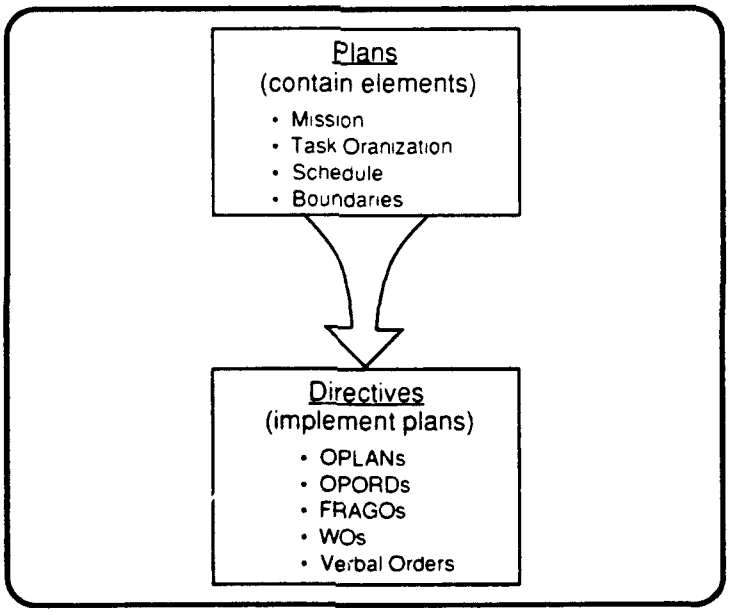


Figure 3. Plans and Directives

G.1.0 Plan Duration. Median length of time (in hours) plans stay in effect without changes to any major elements beyond the contingencies stated in the plan. Computation: [time the plan ends minus time the plan is implemented].

Table 1

Plan Duration (Hours)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	0.8	3.2	4.8	-	3.8
DREAR	-	6.9	-	-	-	6.9
All	-	3.9	3.2	4.8	-	4.2

Scores for this measure were based on nine of the ten FRAGOs issued by the division after STARTEX. One plan, implemented on Day 4, could not be scored, as it was still in effect at ENDEX, after 27.3 hours. DMAIN issued all FRAGOs except for one which was issued by DREAR. The median plan duration for the division, based on the nine plans scored, was 4.2 hours. As indicated in Table 1 on Day 2, one plan lasted less than an hour due to schedule changes necessitated by congestion on the main supply routes (MSRs) that caused the division to prioritize unit movement on the MSR. This schedule change was implemented in the FRAGO issued by DREAR.

There were no plans implemented on Day 5, and the median value for plan duration derived for Day 4 is not a true representative because of the plan that was still in effect at ENDEX. Duration of the division's plans, as shown in Figure 4, reflected the battle activity; short duration plans during the offense and longer duration plans during preparation for and conduct of the defense.

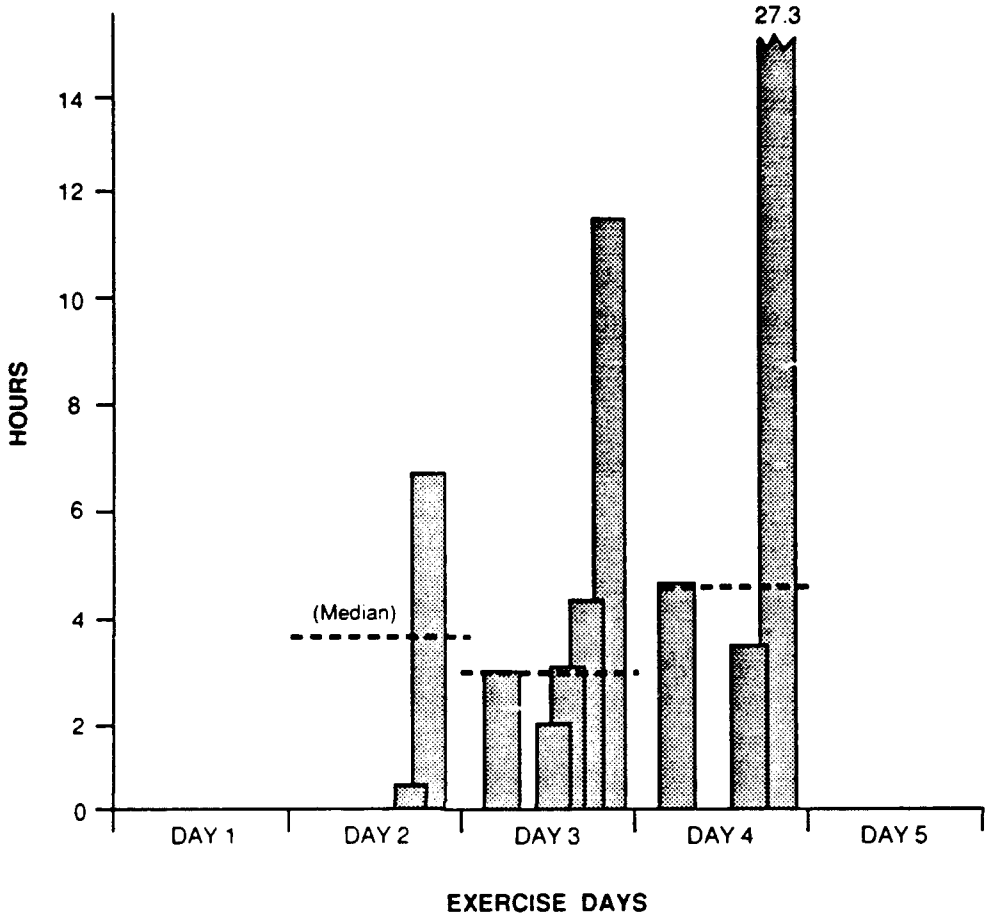


Figure 4. Plan Duration

G.2.0 Plan Stability. Percentage of time that plans remain in effect (without major change) throughout their intended lives. Computation: [total plan duration ÷ total intended plan duration].

Table 2

Plan Stability (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	4 [.8/20]	7 [5.2/60]	14 [8.6/60]	-	10 [14.6/140]

Of the 9 FRAGOs used to score Plan Duration (G.1.0), four could not be scored under this measure because their intended lives could not be

determined. None of the plans remained in effect for the duration of their intended lives. Poor plan stability (less than 10%) for Days 2 and 3 was mainly due to the many plan changes made to maintain combat power for offensive operations. The instability of the two plans implemented and cancelled on Day 4 was caused by changes designed to respond to an expected enemy attack. Plan stability cannot be assessed accurately for Day 4 because one plan was still in effect and had not been fully completed at ENDEX.

G.3.0 Planning Effectiveness. Percentage of plan elements that remain in effect (without change beyond contingencies included in the plan) during the period of plan execution. Computation: [total # of plan elements surviving ÷ total # of plan elements].

Table 3

Planning Effectiveness (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	75 [3/4]	60 [12/20]	50 [4/8]	-	59 [19/32]
DREAR	-	75 [3/4]	-	-	-	75 [3/4]
All	-	75 [6/8]	60 [12/20]	50 [4/8]	-	61 [22/36]

Sixty one percent of plan elements remained in effect during execution of the nine plans scored. On some occasions the division underestimated the enemy's combat capability when planning for an attack. As a result task organizations had to be changed often to bring sufficient power to bear against a stronger-than-anticipated enemy force. One plan was changed by DREAR when movement of the division reserve was hampered by obstacles, destroyed bridges, and congestion. Boundaries generally remained stable, with only two boundary changes made.

G.4.0 Plan Success. The percentage of plans that are dominant (can be executed without change) or are adaptive (can be executed with changes within the contingencies included in the plan). The remainder of plans are unsuccessful (cannot be executed without major change). Computation: [(# of dominant plans + # of adaptive plans) ÷ total # of plans].

Table 4

Plan Success (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	0 [0/1]	0 [0/5]	0 [0/2]	-	0 [0/8]
DREAR	-	0 [0/1]	-	-	-	0 [0/1]
All	-	0 [0/2]	0 [0/5]	0 [0/2]	-	0 [0/9]

None of the plans issued could be fully executed without change and none contained any contingency plans. The lack of contingency planning and inability of the division to fully execute any plan caused all plans to be unsuccessful.

G.5.0 Planning Initiative. Percentage of directives that are proactive (assume friendly force dominance) or are contingent (assume changes in friendly actions may be forced by the enemy). The remainder of directives are reactive (assume the enemy has the initiative). Computation: [(# of proactive directives + # of contingent directives) ÷ total # of directives].

Table 5

Planning Initiative (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	100 [3/3]	100 [3/3]	50 [2/4]	100 [1/1]	82 [9/11]
DTAC	-	0 [0/2]	-	-	-	0 [0/2]
2nd Bde	100 [1/1]	100 [1/1]	-	-	100 [1/1]	100 [3/3]
All	100 [1/1]	67 [4/6]	100 [3/3]	50 [2/4]	100 [2/2]	75 [12/16]

During Days 1 and 2 of the exercise when the division was infiltrating and preparing to attack, most directives issued by the division were proactive. During the offensive operation on Day 3, all directives issued were proactive. On Day 4, when the division went into the defense and friendly units were reconstituted, division directives did not contain any contingencies and the division was forced to issue reactive directives.

G.6.0 Planning Cycle Time. Median time (hours) required to complete a planning cycle. Computation: [time directive issued - time stimulus perceived].

Table 6

Planning Cycle Time (Hours)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	6.7	6.1	4.1	7.4	5.8

Many of the directives issued by the division were informal and had no observed relationship to planning conducted by the division staff. Of the 16 directives that could be identified as the product of a formal planning process, only eight could be scored for this measure, because the time the planning stimuli were perceived could not be determined in the other cases. The staff at DMAIN, where all formal planning was accomplished, required a median of 5.8 hours to complete their planning cycles.

Summary of observations related to General measures. Established plans implemented before the start of the exercise (STARTEX) were not evaluated for this category, but these plans did remain stable until congestion on the MSRs caused a FRAGO to be issued by DREAR to prioritize unit movement. When the division began its attack on Day 2, many plan changes were made to maintain combat power, and all plans implemented during the offensive phase were unstable. Plan stability did improve a little during the defensive phase. None of the plans implemented in the defensive phase, however, remained in effect throughout the duration of their intended lives. None of the plans implemented by the division during the exercise could be fully completed without change and none included any contingencies.

Category I: Incoming Information Handling Measures in this category deal with the punctuality, clarity, completeness, accuracy, and currency of situation reports received in the CPs and the impacts of the quality of reports on the planning process. ACCES data are collected on friendly situation reports (SITREPs), intelligence summaries (INTSUMs), spot reports on friendly and enemy activities, and weather/terrain reports and on the changes in plans that seem to be due to poor quality reporting.

I.1.11 SITREP Punctuality. Percentage of SITREPs received early or on time, based upon unit SOP for reporting. Computation: [# of SITREPs received early or on time.÷ # of SITREPs received].

Table 7

SITREP Punctuality (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	0 [0/1]	40 [2/5]	100 [1/1]	0 [0/1]	-	38 [3/8]
DTAC	-	0 [0/1]	100 [1/1]	-	50 [2/4]	50 [3/6]
DREAR	0 [0/1]	-	-	-	-	0 [0/1]
All	0 [0/2]	33 [2/6]	100 [2/2]	0 [0/1]	50 [2/4]	40 [6/15]

There were 15 SITREPs received in the division CPs and most SITREPs were received late. On many occasions division CPs prompted subordinate units to submit SITREPs.

I.1.21 INTSUM Punctuality Percentage of INTSUMs received early or on time, based upon unit SOP for reporting. Computation: [# of INTSUMs received early or on time ÷ # of INTSUMs received].

Table 8

INTSUM Punctuality (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	0 [0/1]	25 [1/4]	-	0 [0/1]	-	17 [1/6]
DREAR	-	0 [0/3]	-	-	-	0 [0/3]
All	0 [0/1]	14 [1/7]	-	0 [0/1]	-	11 [1/9]

There were nine INTSUMs received in the division CPs and most INTSUMs were received late.

I.2.1 SITREP Completeness. Percentage of SITREPs that include all required elements (unit ID, unit location, capability, and combat activity). Computation: [# of complete SITREPs ÷ # of SITREPs received].

Table 9

SITREP Completeness (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	100 [1/1]	80 [4/5]	100 [1/1]	100 [1/1]	-	88 [7/8]
DTAC	- 100 [1/1]	100 [1/1]	-	50 [2/4]		80 [4/6]
DREAR	100 [1/1]	-	-	-	-	100 [1/1]
All	100 [2/2]	83 [5/6]	100 [2/2]	100 [1/1]	50 [2/4]	80 [12/15]

Most SITREPs received at the division CPs were complete. The two incomplete SITREPs at DTAC were missing capability and location, and the one at DMAIN lacked activity.

I.2.2 INTSUM Completeness. Percentage of INTSUM that include all required elements (unit ID, unit location, capability, and combat activity). Computation: [# of complete INTSUMs ÷ # of INTSUMs received].

Table 10

INTSUM Completeness (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	100 [1/1]	100 [4/4]	-	100 [1/1]	-	100 [6/6]
DREAR	-	100 [3/3]	-	-	-	100 [3/3]
All	100 [1/1]	100 [7/7]	-	100 [1/1]	-	100 [9/9]

All nine INTSUMs received at the division CPs were complete.

[Note: the data collected did not support computation of the following six measures.]

I.3.1 SITREP Non-Location Accuracy. Percentage of non-location SITREP elements that are correct in comparison with ground truth.

I.3.14 SITREP Location Accuracy. Median error in reported unit locations as compared to ground truth location data.

I.3.2 INTSUM Non-Location Accuracy. Percentage of non-location INTSUM elements (unit ID, capability, and combat activity) that are correct in comparison with ground truth.

I.3.24 INTSUM Location Accuracy. Median error in reported unit locations as compared to ground truth location data.

I.4.1 SITREP Information Currency. Median age of the oldest SITREP elements at time SITREP was sent.

I.4.2 INTSUM Information Currency. Median age of the oldest INTSUM elements at time INTSUM was sent.

I.5.1 SITREP Requests for Information. Percentage of missing or unclear SITREP elements queried. Computation [# of SITREP elements queried ÷ # of SITREP elements missing or unclear].

Neither DTAC nor DMAIN queried the SITREPs that were received with missing elements. Apparently, SITREPs did not contain any unclear elements and were accepted "as is" without any questions.

I.5.15 Friendly Spot Reports Queried. Percentage of friendly spot reports with missing or unclear information that are queried. Computation: [# of friendly spot reports queried ÷ # of friendly spot reports with missing or unclear information].

Table 11

Friendly Spot Reports Queried (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	13 [1/8]	0 [0/12]	0 [0/3]	0 [0/1]	100 [1/1]	8 [2/25]
DTAC	25 [1/4]	13 [1/8]	0 [0/3]	0 [0/1]	0 [0/1]	9 [2/17]
DREAR	-	0 [0/2]	50 [2/4]	0 [0/5]	0 [0/3]	0 [2/14]
2nd Bde	50 [1/2]	-	-	-	100 [1/1]	67 [2/3]
All	21 [3/14]	5 [1/22]	20 [2/10]	0 [0/7]	33 [2/6]	14 [8/59]

Staff personnel within the division queried eight friendly spot reports that contained unclear information. Fifty five spot reports omitted one or more of the elements that are required in a friendly status report, and the reports were not queried. This should not be interpreted as a problem, except in those 19 reports where unit ID was missing, as spot reports are used to update the status, activities and/or locations of friendly units and need not contain elements that are unchanged since the last report.

I.5.2 INTSUM Requests for Information. Percentage of missing or unclear INTSUM elements queried. Computation: [# of INTSUM elements queried ÷ # of INTSUM elements missing or unclear].

As noted in I.2.2, all INTSUMs were complete. Apparently all INTSUMs received were clear, as none were ever queried by staff personnel in the division.

I.5.25 Enemy Spot Reports Queried. Percentage of enemy spot reports with missing or unclear information that are queried. Computation: [# of enemy spot reports queried ÷ # of enemy spot reports with missing or unclear information].

Table 12

Enemy Spot Reports Queried (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	0 [0/4]	11 [1/9]	0 [0/1]	0 [0/4]	25 [1/4]	9.0 [2/22]
DTAC	-	0 [0/1]	0 [0/3]	7.0 [1/14]	0 [0/8]	4.0 [1/26]
DREAR	0 [0/6]	0 [0/15]	8.0 [1/13]	0 [0/10]	0 [0/4]	2.0 [1/48]
2nd Bde	0 [0/1]	0 [0/4]	0 [0/4]	0 [0/5]	-	0 [0/14]
All	0 [0/11]	7.0 [2/29]	5.0 [1/21]	3.0 [1/33]	6.0 [1/16]	4.0 [4/110]

One hundred and twenty nine enemy spot reports were received and reviewed by staff personnel in the division during the exercise. Although 110 reports were missing one or more elements and/or contained one or more unclear elements, the staff personnel questioned the contents of only four of them.

I.6.1 SITREP Satisfaction. Percentage of SITREPs that require no follow-up. Computation: [# of successful SITREPs ÷ # of SITREPs received].

Table 13

SITREP Satisfaction (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	100 [1/1]	100 [5/5]	100 [1/1]	100 [1/1]	-	100 [13/13]
DTAC	-	100 [1/1]	100 [1/1]	-	100 [4/4]	100 [6/6]
DREAR	100 [1/1]	-	-	-	-	100 [1/1]
All	100 [2/2]	100 [6/6]	100 [2/2]	100 [1/1]	100 [4/4]	100 [15/15]

Despite elements missing or unclear in two of the four SITREPs received at DTAC on Day 5 and in one of the SITREPs received at DMAIN on Day 2, staff personnel never questioned them.

I.6.2 INTSUM Satisfaction. Percentage of INTSUMs that require no follow-up. Computation: [# of successful INTSUMs ÷ # of INTSUMs received].

Table 14

INTSUM Satisfaction (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	100 [1/1]	100 [4/4]	-	100 [1/1]	-	100 [6/6]
DREAR	-	100 [3/3]	-	-	-	100 [3/3]
All	100 [1/1]	100 [7/7]	-	100 [1/1]	-	100 [9/9]

INTSUMs received at division did not require a follow up, as all required elements were present and apparently understood at the receiving CPs.

[Note: the data collected did not support computation of the following nine measures.]

I.7.11 Friendly Spot Report Currency. Median age of friendly spot reports' information when transmitted.

I.7.21 Enemy Spot Report Currency. Median age of enemy spot reports' information when transmitted.

I.8.1 Friendly Spot Report Non-Location Accuracy.

I.8.14 Friendly Spot Report Location Accuracy. Median error in reported unit locations as compared to ground truth location data.

I.8.2 Enemy Spot Report Non-Location Accuracy.

I.8.24 Enemy Spot Report Location Accuracy. Median error in reported unit locations as compared to ground truth location data.

I.9.11 Weather and Terrain Report Currency. Median age of information in weather and terrain when transmitted.

I.9.2 Weather and Terrain Report Accuracy. Percentage of weather and terrain report elements correct.

I.10.0 Report Impact on Plans. Percentage of plan changes not directly attributable to reporting problems (errors, lack of clarity, missing elements or lack of currency).

Summary of observations related to measures of the handling of incoming information. Throughout the exercise, SITREPs and INTSUMs were received late. However, most of these reports contained all required elements and did not elicit any staff requests for clarification from the sender. Much of the data necessary to assess the accuracy of SITREPs and INTSUMs was impractical to obtain by the ACCES observers. Very few friendly and enemy spot reports were queried by the staff or command recipient for missing and/or unclear elements. Much of the data needed to assess measures in this category were missing, and no meaningful conclusions can be drawn about the quality of incoming information or its impact on the division's planning process.

Category T: Tracking the Situation The measures in this category focus on the ability of the staff to maintain a complete and accurate picture of the friendly and enemy situations. The measures also include the ability of the staff to develop useful predictions of enemy courses of action and to look far enough into the future to support the planning process. Finally, the impact of the quality of staff assessments on the effectiveness of planning is scored. Assessments of friendly and enemy situation are categorized into two categories: formal; and informal. "Formal" situation assessments occur when there is a recurring, periodic situation briefing by one or more staff officers; examples include shift-change briefings and the 0700 commander's briefing found in some units. "Informal" situation assessments occur whenever they are requested by a senior member of the command group or visiting senior officer, or whenever the TAC battle captain, for example, feels that it is important to reassess the current situation.

T.1.1 Completeness of Friendly Situation Assessments (FSAs). Percentage of formal FSAs that contained all six required elements (mission, task organization, disposition, activities, status and combat service support). Computation: [# of complete formal FSAs ÷ # of formal FSAs].

Table 15

Completeness of FSAs (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	50 [1/2]	40 [2/5]	0 [0/3]	33 [1/3]	0 [0/2]	27 [4/15]
DTAC	0 [0/5]	33 [1/3]	33 [1/3]	0 [0/2]	0 [0/1]	14 [2/14]
DREAR	-	50 [1/2]	100 [1/1]	-	-	67 [2/3]
2nd Bde	0 [0/2]	-	-	-	-	0 [0/2]
All	11 [1/9]	40 [4/10]	29 [2/7]	20 [1/5]	0 [0/3]	24 [8/34]

Staffs throughout the division prepared incomplete assessments of the friendly situation. Discussion of combat service support was missing more than 60% of the time, and discussion of task organization was missing more than 45% of the time. Some incomplete assessments led to confusion regarding which units were in division reserve for the attack phase on Day 2 and led to doubt as to the adequacy of combat power in conducting a river crossing.

T.1.2 Completeness of Enemy Situation Assessments (ESAs). Percentage of the ESAs that included the five required elements (composition, disposition, combat power, activities, and courses of action). Computation: [# of complete formal ESAs ÷ # of formal ESAs conducted].

Table 16

Completeness of ESAs (%)

CP	DAY 1	2	3	4	5	AGGREGATE
DMAIN	0 [0/2]	50 [1/2]	33 [1/3]	0 [0/2]	-	22 [2/9]
DTAC	0 [0/2]	-	-	-	-	0 [0/2]
DREAR	-	-	-	-	100 [1/1]	100 [1/1]
2nd Bde	-	-	-	0 [0/1]	-	0 [0/1]
All	0 [0/4]	50 [1/2]	33 [1/3]	0 [0/3]	100 [1/1]	23 [3/13]

All staffs, with the exception of the staff at DREAR, prepared incomplete assessments of the enemy situation. Discussion of enemy courses of action was missing in more than 45% of the ESAs, and discussion of enemy combat power was missing in more than 35% of the ESAs. Incomplete ESAs led the ADC-M at DTAC to query some of the information posted on the situation map, thereby delaying some decisions made by the division commander.

T.2.1 ACCURACY of FSAs. Percentage of FSAs (either formal or informal, complete or incomplete) found to be correct or not incorrect through comparison with ground truth data and events that occurred as the exercise progressed. An assessment is judged to be "not incorrect" if the ground truth is found among a set of alternate possibilities considered, even if it is not the possibility judged to be most likely. Computation: [(# of correct FSAs + # of not incorrect FSAs) ÷ total # of FSAs evaluated].

Table 17

Accuracy of FSAs (%)

CP	DAY 1	2	3	4	5	AGGREGATE
DMAIN	-	100 [5/5]	100 [2/2]	100 [2/2]	-	100 [9/9]
DTAC	100 [4/4]	100 [2/2]	100 [4/4]	100 [2/2]	100 [1/1]	100 [13/13]
DREAR	-	-	100 [3/3]	100 [2/2]	-	100 [5/5]
All	100 [4/4]	100 [7/7]	100 [9/9]	100 [6/6]	100 [1/1]	100 [27/27]

Although formal FSAs generally lacked many of the elements required, FSAs (formal and informal) conducted within the division, and the conclusions drawn in them, proved to be highly accurate.

T.2.2 ACCURACY of ESAs. Percentage of ESAs (either formal or informal, complete or incomplete) found to be correct or not incorrect in comparison with ground truth. Computation: [(# of correct ESAs + # of not incorrect ESAs) ÷ total # of ESAs evaluated].

Table 18

Accuracy of ESAs (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	75 [3/4]	100 [4/4]	67 [2/3]	-	82 [9/11]
DTAC	0 [0/1]	100 [3/3]	67 [2/3]	100 [2/2]	-	78 [7/9]
DREAR	-	-	-	100 [1/1]	100 [2/2]	100 [3/3]
2nd Bde	-	-	100 [1/1]	100 [1/1]	-	100 [2/2]
All	0 [0/1]	86 [6/7]	88 [7/8]	86 [6/7]	100 [2/2]	84 [21/25]

Despite the incomplete nature of formal ESAs conducted, ESAs (formal and informal) were fairly accurate in information content and conclusions drawn. The division apparently did not, however, use the available information effectively, as evidenced by the fact that plans for an offensive operation failed because the enemy was found to have greater fire power than had been anticipated.

T.3.0 Time Span of the Assessments. Median time (in hours) the assessments are intended to cover. Computation: Median time of all assessments [end of period assessment covers - time assessment expressed].

Table 19

Time Span of the Assessments (Hours)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	18.0	72.0	36.0	24.0	24.0	24.0
DTAC	1.5	3.0	36.0	12.5	13.5	4.5
DREAR	- -	-	11.8	-		11.8
2nd Bde	-	2.5	10.7	10.8	12.0	6.8
All	2.0	3.0	30.0	12.0	18.0	12.0

Forty eight formal situation assessments (friendly and enemy) were conducted. Six of these did not have projected times associated with them and could not be scored for this measure. In general, division staffs looked well into the future in assessing both friendly and enemy situations.

T.4.0 ssessment Impact on Plans. Percentage of changes made in plans that are not directly attributable to the quality of SAs supporting the planning process. Computation: [# of plan changes not due to quality of SAs ÷ total # of plan changes].

Insufficient data were collected to address the impact of assessments on plans. However, indications are that accurate information was available and was not used effectively. This led to the development of plans that could not be executed successfully because unexpected situations were encountered.

Summary of observations related to measures of Tracking the Situation. Division staffs were able to formulate rather accurate assessments of both the friendly and enemy situations, but apparently did not use effectively ESAs in the information contained in development of plans. Divisions staffs generally projected assessments far enough into the future to allow for thorough planning. The major weakness in the situation assessments was that they were consistently incomplete.

Category IC: Information Congruence. The measures in this category address the consistency of information held by the various cells within CPs (Intra-CP) and among different CPs (Inter-CP). Measures also include the staffs' abilities to recognize the need for and conduct timely coordination to harmonize information and synchronize actions. Information congruence is dependent upon timely and accurate sharing of information among elements of the organization on both the friendly and enemy situation. Incongruent information among cells and CPs will lead to confusion and uncoordinated, ineffective planning.

IC.1.0 Intra-Command Post (CP) Agreement on the Battlefield Picture. Percentage of agreement among cells within CPs on Situation Assessments (SAs) of friendly and enemy forces. Computation: [# of SA information pairs in agreement ÷ total # of SA information pairs compared].

Table 20

Intra-Command Post (CP) Agreement on the Battlefield (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	67 [2/3]	67 [2/3]	-	-	-	67 [4/6]
DTAC	33 [1/3]	-	-	100 [1/1]	-	50 [2/4]
2nd Bde	-	-	0 [0/5]	-	-	0 [0/5]
All	50 [3/6]	67 [2/3]	0 [0/5]	100 [1/1]	-	40 [6/15]

Among all the data collected on situation assessments, it is difficult to find many cases where different cells in the same CP performed assessments that can be compared in time and subject matter. In those instances where comparisons can be made, information on friendly and enemy situations generally differed among cells, particularly information on friendly combat activity and on enemy force disposition.

IC.2.0 Inter-CP Agreement on the Battlefield Picture. Percentage of agreement among CPs on SAs of friendly and enemy forces. Computation: [# of SA information pairs in agreement ÷ total # of SA information pairs compared]. Comparisons among CPs are made using the data held in the DTAC and DMAIN current operations cell, and in the S3 area at 2nd Bde.

Table 21

Inter-CP Agreement on the Battlefield Picture (%)

CP	DAY 1	2	3	4	5	AGGREGATE
DMAIN	0 [0/1]	0 [0/1]	50 [2/4]	-	-	33 [2/6]
DTAC	-	-	60 [3/5]	-	67 [2/3]	63 [5/8]
DREAR	-	-	100 [1/1]	-	67 [2/3]	75 [3/4]
2nd Bde	0 [0/1]	0 [0/1]	-	-	-	0 [0/2]
All	0 [0/2]	0 [0/2]	60 [6/10]	-	67 [4/6]	50 [10/20]

Information on friendly and enemy situations differed frequently in the assessments developed between CPs. Unit status was most often different between friendly SAs, followed by mission and task organization, while in enemy SAs, discrepancies existed in evaluations of predicted enemy courses of action.

IC.3.1 Intra-CP Coordination Cycle Time. Median time (in hours) between recognition of a need for coordination and resolution of the issue. Coordination is action taken to harmonize the activities of two or more units or elements within units. For example, a unit operating on the flank of another would need to effect periodic coordination of the movement of elements to insure that no gaps were allowed to open. Within a CP one cell might coordinate with another to insure the two cells were operating from the same information base and were synchronized in their planning. Computation: Median of coordination times within CPs [time of resolution - time need for coordination is perceived].

Note: As discussed on page 10 above, the medians presented in Table 22 below and similar tables are computed based on non-zero values only. The median value in each cell of the table is followed by brackets [] containing the total number of coordinations recorded and the number of zero-value coordinations. For example, on Day 2 across all CPs there were 16 coordinations recorded, of which six were completed instantaneously. The median time for the other ten (non-zero) coordinations was .3 hours or about 18 minutes. These results are indicated by the notation .3 [16/6].

Table 22

Intra-CP Coordination Cycle Time (Hours)

CP	DAY 1	2	3	4	5	AGGREGATE
DMAIN	-	.1 (7|3)	.3 (1|0)	.4 (6|3)	.3 (5|0)	.3 (19|6)
DTAC	-	.3 (2|0)	.5 (1|0)	_ (8|8)	-	.3 (11|8)
DREAR	-	.9 (3|0)	-	.4 (3|0)	.5 (3|1)	.5 (9|1)
2nd Bde	_ (1|1)	.4 (4|3)	.5 (2|0)	2 (1|0)	.4 (2|0)	.5 (10|4)
All	_ (1|1)	.3 (16|6)	.5 (4|0)	.4 (18|11)	.3 (10|1)	.4 (49|19)

There were 127 situations where a need for coordination was known to have been perceived by the staff , and in all but one case coordination was attempted (see Figure 5). Of the attempts, only 49 could be scored for time, as in the other 77 cases the observers did not capture either the time the need for coordination was perceived or the time of resolution. 19 of the 49 coordinations were completed instantaneously while the others were completed in a timely manner. One notable exception was at 2nd Bde on Day 4 when it took two hours to develop several courses of action and for the different staff sections to wargame each COA before the preferred COA was chosen.

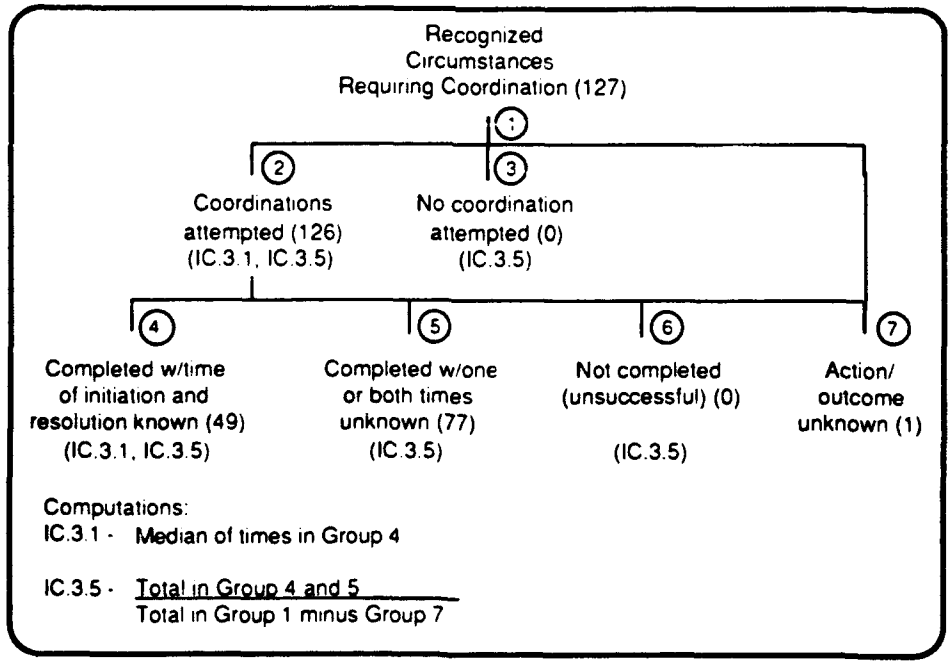


Figure 5. Intra-CP Coordination Outcomes

IC.3.5 Intra-CP Coordination Success. Percentage of required coordinations successfully completed. Computation: [# of coordinations completed ÷ # of number required coordinations recognized].

Table 23

Intra-CP Coordination Success (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	100 [10/10]	100 [22/22]	100 [13/13]	100 [18/18]	100 [11/11]	100 [74/74]
DTAC	-	100 [4/4]	100 [6/6]	100 [14/14]	100 [1/1]	100 [25/25]
DREAR	-	100 [3/3]	100 [2/2]	100 [3/3]	100 [4/4]	100 [12/12]
2nd Bde	100 [6/6]	100 [4/4]	100 [2/2]	100 [1/1]	100 [2/2]	100 [15/15]
All	100 [16/16]	100 [33/33]	100 [23/23]	100 [36/36]	100 [18/18]	100 [126/126]

As shown in Figure 5, 127 situations were noted where coordination was needed. Of the 126 coordinations attempted, all were successfully completed.

IC.4.1 Inter-CP Coordination Cycle Time. Median time (in hours) between recognition of a need for coordination and resolution of the issue. Computation: Median of coordinations between CPs [time of resolution - time need for coordination is perceived].

Table 24

Inter-CP Coordination Cycle Time (Hours)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	_ [1 | 1]	.3 [3 | 1]	.4 [3 | 2]	.3 [3 | 1]	3.0 [5 | 3]	.4 [15 | 8]
DTAC	.3 [6 | 5]	.8 [26 | 21]	.4 [18 | 14]	__ [9 | 9]	.2 [2 | 0]	.3 [61 | 49]
DREAR	-	-	1.0 [3 | 1]	.6 [7 | 2]	5.1 [2 | 1]	1.0 [12 | 4]
2nd Bde	.3 [4 | 2]	_ [1 | 1]	.6 [6 | 5]	.6 [4 | 2]	.4 [5 | 0]	.5 [20 | 10]
All	.3 [11 | 8]	.3 [30 | 23]	.6 [30 | 22]	.6 [23 | 14]	.6 [14 | 4]	.4 [108 | 71]

There were 163 situations where a need for coordination was perceived; 160 coordinations were attempted (see Figure 6). Of the attempts, only 108 could be scored, as the observers did not record either the time the need for coordination was perceived or the time of resolution in the other cases. Two-thirds of the 108 scored coordinations were completed instantaneously with the remainder completed in a timely manner, (i.e., one hour or less).

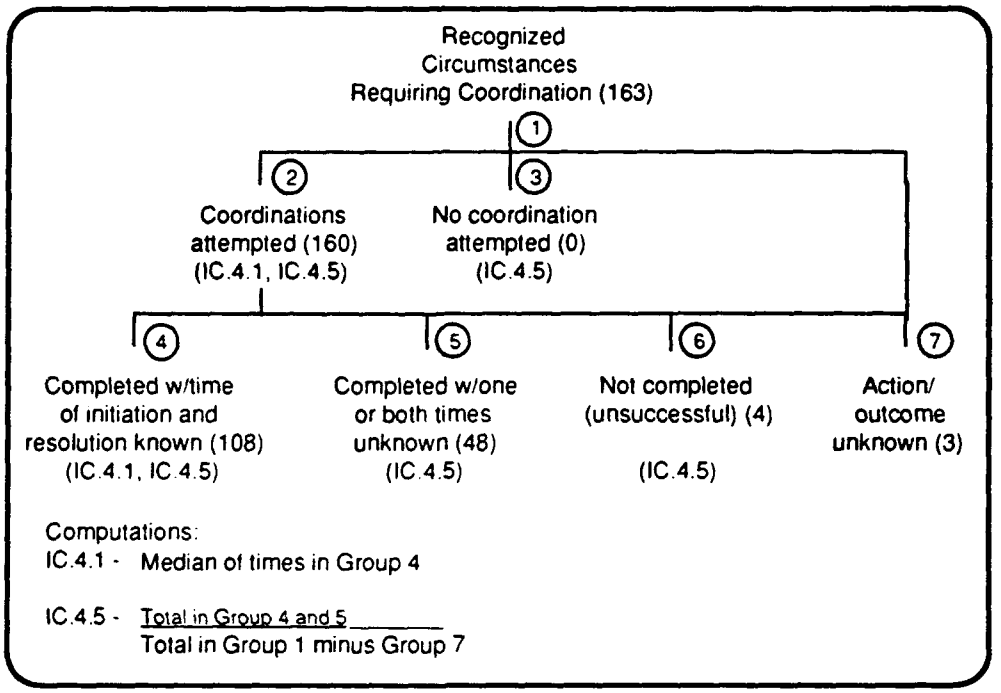


Figure 6. Inter-CP Coordination Outcomes

IC.4.5 Inter-CP Coordination Success. Percentage of required coordinations successfully completed. Computation: [# of coordinations completed ÷ # of required coordinations recognized].

Table 25

Inter-CP Coordination Success (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	75 [3/4]	100 [8/8]	100 [4/4]	100 [5/5]	100 [5/5]	96 [25/26]
DTAC	100 [6/6]	100 [33/33]	100 [25/25]	100 [13/13]	100 [16/16]	100 [93/93]
DREAR	-	100 [1/1]	100 [5/5]	100 [8/8]	-	100 [14/14]
2nd Bde	100 [5/5]	100 [1/1]	88 [7/8]	80 [4/5]	88 [7/8]	89 [24/27]
All	93 [14/15]	100 [43/43]	98 [41/42]	97 [30/31]	97 [28/29]	98 [156/160]

As shown in Figure 6, 163 situations were noted where inter-CP coordination was needed, and three of the 163 situations could not be scored because no data were recorded as to whether the coordination was attempted and/or what the outcome was.. Of the 160 coordination attempts, 156 were successfully completed, while four were unsuccessful.

IC.5.0 Inter-CP Consistency of Directives. Percentage of directives issued by alternate CPs that do not conflict with those issued by the primary CP. The primary CP is defined as the CP where tactical decisions are made and directives issued for conduct of the close battle. Other CPs are considered alternates only when they assume control of the close battle from the primary CP. Computation: [# of non-conflicting directives ÷ # of directives issued].

DMAIN was the primary CP for the division throughout most of the exercise, and none of the other CPs assumed control of the close battle from DMAIN. Therefore, this measure cannot be evaluated.

IC.6.0 Coordination Impact on Plans. Percentage of changes in plans not attributable to coordination. Computation: [# of plan changes not attributable to coordination ÷ total # of plan changes].

Coordination between cells within CPs and coordination between CPs were highly successful and did not have any negative impact on plan changes.

Summary of observations related to measures of information congruence. Within CPs assessments of the friendly and enemy situations were less consistent than those of the friendly and enemy situation among CPs. Coordinations within CPs and among CPs were generally completed in a timely manner. Due to highly successful coordinations in more than 98% of the instances that could be evaluated, none of the problems in the planning process can be attributed to coordination issues.

Category PC: Predict Courses of Action. The measures in this category address the ability of the staff to generate and analyze alternative courses of action (COAs) and to predict accurately the consequences of those COAs. One of the presumed benefits of a staff is the potential for obtaining multiple points of view and sources of information during the planning process. Several of the measures in this category address the extent to which the unit did have involved several people with different perspectives. Evaluation of prediction "accuracy" is accomplished by comparing the COA outcomes predicted by the staff with the actual outcomes. Data elements considered include each COA generated and analyzed, together with the number of staff members and staff sections involved in the decision process over a period of time.

PC.1.0 Number of Participants - COAs. Median number of staff members who participated actively in developing and assessing COAs.

Table 26

Number of Participants - COAs

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	3.0	3.0	18.0	10.0	5.0
DTAC	5.0	-	-	-	-	5.0
2nd Bde	8.0	-	5.5	1.0	4.0	4.0
All	5.5	3.0	4.0	9.5	7.0	5.0

The number of staff personnel participating in the development and assessment of courses of action varied considerably through the exercise and across different CPs. The highest number of persons participating in developing COAs were the eight personnel involved at 2nd Bde on Day 1 and the 18 and 10 staff personnel participating at DMAIN on Days 4 and 5, respectively. These high numbers may reflect an anomaly in the data collection process and should be interpreted with caution.

PC.2.0 Variety of Participants - COAs. Median number of staff sections that were represented actively in COA development and assessment.

Table 27

Variety of Participants - COAs

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	2.0	2.0	12.0	5.0	3.5
DTAC	2.0	-	-	-	-	2.0
2nd Bde	7.0	-	8.0	1.0	4.0	5.5
All	2.5	2.0	5.0	6.5	4.5	3.0

At least two staff sections participated in the development and assessment of all COAs, except at 2nd Bde on Day 4 where the S3 developed and assessed the COAs without input from other sections. The numbers of staff sections recorded on Days 1 and 3 at 2nd Bde and on Day 4 at DMAIN are obviously out of line with the units' organizational structure, and these data should be interpreted with caution.

PC.3.0 Alternative COAs. Median number of COAs explicitly considered in the development of each plan.

Table 28

Alternative COAs

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	1.0	2.0	2.0	2.0	2.0
DTAC	1.0	-	-	-	-	1.0
2nd Bde	1.0	-	2.0	1.0	2.0	2.0
All	1.0	1.0	2.0	1.5	2.0	2.0

The division explicitly considered, at most, two courses of action in the development of its plans.

PC.4.0 Completeness of COA Analysis. Percentage of COA analyses that included all required elements (enemy reaction, mission accomplishment, friendly capacity and enemy capacity). Computation: [# of complete COA analyses ÷ total # of COA analyses conducted].

Table 29

Completeness of COA Analysis (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	80 [4/5]	100 [2/2]	0 [0/2]	100 [2/2]	73 [8/11]
DTAC	25 [1/4]	-	-	-	-	25 [1/4]
2nd Bde	0 [0/1]	-	50 [2/4]	100 [1/1]	100 [2/2]	63 [5/8]
All	20 [1/5]	80 [4/5]	67 [4/6]	33 [1/3]	100 [4/4]	61 [14/23]

There were 23 COAs considered by the division that were utilized in preparing plans issued. Many COA analyses lacked at least one required element. Estimates of the probability of mission accomplishment and predictions of enemy reaction were the elements most frequently missing.

PC.5.0 Accuracy of COA Analysis. Percentage of COA analyses found to be correct or not incorrect when evaluated in comparison with ground truth data and events that occurred during execution of the plan. Computation: [(# of correct COA analyses + # of not incorrect COA analyses) ÷ total # of COA analyses evaluated].

Table 30

Accuracy of COA Analysis (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	100 [4/4]	-	50 [1/2]	0 [0/2]	63 [5/8]
DTAC	75 [3/4]	-	-	-	-	75 [3/4]
2nd Bde	100 [1/1]	-	0 [0/2]	100 [1/1]	50 [1/2]	50 [3/6]
All	80 [4/5]	100 [4/4]	0 [0/2]	67 [2/3]	25 [1/4]	61 [11/18]

Of the 23 COAs that were selected for implementation in the plans issued, the contents of only 18 could be correlated with ground truth data for comparison purposes. Seven analyses were incorrect, with a majority of them having probability of mission accomplishment incorrect.

PC.6.0 COA Analysis Time Span. Median time (in hours) the COA analyses cover. Computation: Median time span of all COA analyses [end of period analysis covers - time assessment expressed].

Table 31

COA Analysis Time Span (Hours)

CP	DAY 1	2	3	4	5	AGGREGATE
DMAIN	-	36.0	24.0	24.0	-	24.0
DTAC	1.9	-	-	-	-	1.9
2nd Bde	48.0	-	48.0	12.0	12.0	30.0
All	24.9	36.0	36.0	18.0	12.0	24.0

The COAs developed by the division staffs covered a median time span of 24 hours which is consistent with their ability to assess the friendly and enemy situations. An anomaly noted in the data was the fact that the 2nd Bde on two occasions developed COAs that projected twice as far into the future as the planning conducted at division level.

PC.7.0 COA Impact on Planning. Percentage of changes made in plans that are not directly attributable to the quality of COA analyses supporting the planning process. Computation: [# of plan changes not due to quality of COA analyses ÷ total # of plan changes].

Indications are that inaccurate estimates of probability of mission accomplishment led to unrealistic expectations and development of unsuccessful plans, particularly in offensive operations.

Summary of observations related to predicting courses of action. Personnel from different staff sections participated in the development and analyses of COAs. Not more than two COAs were considered in the development of division plans. The median time span of the COA analyses was 24 hours, which is consistent with the ability of the division to assess the friendly and enemy situations. Some of the COA analyses were inaccurate and/or were incomplete, with at least one element omitted. The overly optimistic predictions of mission accomplishment probably contributed to the failure of division plans, particularly in the offensive.

Category PD: Preparation of Directive Measures. Measures in this category examine the clarity, timeliness, and accuracy of all directives and orders. Specific information collected includes the number of directives requiring clarification, the timing of all phases of the directives, the portion of C2 planning cycle time available to subordinate units and the number of staff members and sections involved in developing directives. Also addressed is the degree to which directives match with the commander's guidance concerning a particular operation.

PD.1.0 Number of Participants - Directives. Median number of staff members who participated actively in developing and/or assessing directives.

Table 32

Number of Participants - Directives

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	7.0	-	-	-	7.0
DTAC	-	3.5	-	-	-	3.5
2nd Bde	2.0	-	-	-	3.0	2.5
All	2.0	5.0	-	-	3.0	3.0

Thirty six directives were issued by the division, but on only a few occasions was the number of staff personnel who participated in preparing them recorded. In those cases where an observer entry indicated a staff section was represented (PD.2.0), but the number of people was not recorded, at least one member of that staff section is assumed to have participated.

PD 2.0 Variety of Participants - Directives. Median number of staff sections that were represented in directive development and assessment.

Table 33

Variety of Participants - Directives

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	5.0	-	-	-	5.0
DTAC	3.5	-	-	-	-	3.5
2nd Bde	1.0	-	-	-	2.0	1.5
All	2.0	5.0	-	-	2.0	3.0

Generally, personnel from the G-2 and G-3 sections in division CPs participated in the development and assessment of all directives. At the

2nd Bde on Day 1, the directive was prepared by the S3 without input from other sections.

PD.3.0 Directive Preparation Time. Median of the times required to prepare directives after decisions were reached on the COAs to be implemented. Computation: Median of all [time work ceases on directive - time of decision on COA].

Table 34

Directive Preparation Time (Hours)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	3.5	-	7.6	-	4.9

Because of insufficient data, preparation times could be calculated on only three of the 36 directives issued.

PD.4.0 Warning Order Time. Median of the time intervals from decisions on COAs to be implemented to issuance of warning orders. Computation: Median of all [time work ceases on warning order - time of decision on COA].

Data on six warning orders were collected. Some of the warning orders could not be linked to a precise decision time, and the others could not be scored because data on "the times worked ceased on the warning order" were not collected. Therefore, this measure could not be assessed.

PD.5.0 Directive Time Span. The median of the time spans over which directives are expected to remain in effect. Computation: Median of all [time directive expected to be fully completed - time execution of first element is supposed to begin].

Table 35

Directive Time Span (Hours)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	20.0	30.0	30.0	-	20.0

Of the 36 directives issued by the division, sufficient timing data was collected to score five directives for this measure. Directive time spans ranged from 12 hours to 48 hours with a median of 20 hours.

PD.6.0 Directive Match with Commander's Intent. Percentage of directive elements that are consistent with the elements of the commander's stated decision. Note: values for this measure could not be determined from the data collected.

PD.7.0 Clarity of Directives. Percentage of directives that do not require clarification by the issuing headquarters (e.g., responses to subordinate units' questions or staff-initiated clarifications to ambiguous orders). Computation: [# of directives not requiring clarification ÷ total # of directives issued].

Table 36

Clarity of Directives (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	100 [3/3]	100 [3/3]	75 [3/4]	100 [1/1]	91 [10/11]
DTAC	-	100 [2/2]	-	-	-	100 [2/2]
2nd Bde	0 [0/1]	100 [1/1]	-	-	0 [0/1]	33 [1/3]
All	0 [0/1]	100 [6/6]	100 [3/3]	75 [3/4]	50 [1/2]	81 [13/16]

Of the 36 directives issued by the division, there were data relevant for this measure available on 16; of these 16 directives, three required clarifications and 13 did not. It is likely that few if any the 20 directives for which data was unavailable required clarification.

[Note: the data collected did not support computation of the following two measures.]

PD.8.0 Lead Time for Directive Planning. Median time (in hours) available to subordinate commands for planning, from time directive is received until time it is to be implemented.

PD.9.0 Warning Order Lead Time. Median time available to subordinate commands for planning, from time warning order is received until time directive is to be implemented.

PD.10.0 Directive Impact on Plans. Percentage of directives that can be fully implemented on time. Computation: [# of directives fully implemented on time/total # of directives].

Table 37

Directive Impact on Plans (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	0 [0/5]	100 [1/1]	0 [0/1]	100 [1/1]	25 [2/8]
DTAC	-	100 [1/1]	-	-	-	100 [1/1]
2nd Bde	0 [0/1]	-	-	-	-	0 [0/1]
All	0 [0/1]	17 [1/6]	100 [1/1]	0 [0/1]	100 [1/1]	30 [3/10]

Of the 36 directives implemented by the division, times of intended and actual implementation were obtained for 10.. Of the 10, only three were implemented on time.

Summary of observations related to preparation of directives. Directive preparation involved a median of three representatives from three different staff sections. Timing of directive preparation could not be assessed because of insufficient data, but directives were expected to remain in effect for a median of 20 hours. Over 80% of the directives issued were understood by the receiving units but (based on a rather limited sample size) only 30% of them could be implemented on time.

Category O: Outgoing Information Handling. Measures in this category deal with the punctuality, clarity, completeness, accuracy, and currency of situation reports sent by the command posts and the impact of the quality of reports on the planning process. Data are collected on friendly situation reports (SITREPs), intelligence summaries (INTSUMs), weather/terrain reports, and on the changes in plans that must be made because of poor quality reporting.

O.1.11 SITREP Punctuality. Percentage of SITREPs sent early or on time, based upon unit SOP for reporting. Computation: [# of SITREPs sent early or on time ÷ total # of SITREPs sent].

Table 38

SITREP Punctuality (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	50 [1/2]	-	-	-	50 [1/2]
2nd Bde	100 [2/2]	-	-	-	-	100 [2/2]
All	100 [2/2]	50 [1/2]	-	-	-	75 [3/4]

The due time of the commander's situation report (SITREP), as defined in the division TSOP, was used in these computations. Of the five SITREPs transmitted by the division, one could not be scored because the time of transmission was not recorded. Of those that were scored, the two SITREPs transmitted by 2nd Bde on Day 1 were sent within two hours prior to the scheduled due time.

O.1.21 INTSUM Punctuality. Percentage of INTSUMs sent early or on time, based upon unit SOP for reporting. Computation: [# of INTSUMs sent early or on time/total # of INTSUMs sent].

Table 39

INTSUM Punctuality (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	50 [2/4]	50 [1/2]	0 [0/2]	0 [0/1]	33 [3/9]
2nd Bde	-	0 [0/1]	-	-	-	0 [0/1]
All	-	40 [2/5]	50 [1/2]	0 [0/2]	0 [0/1]	30 [3/10]

Most of the nine INTSUMs transmitted by DMAIN and the one from 2nd Bde were sent late.

Q.2.1 SITREP Completeness. Percentage of SITREPs that contained the four elements required (unit ID, unit location, capability, and combat activity). Computation: [# of complete SITREPs ÷ # of SITREPs sent].

Table 40

SITREP Completeness (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	100 [2/2]	-	-	-	100 [2/2]
2nd Bde	100 [2/2]	-	-	100 [1/1]	-	100 [3/3]
All	100 [2/2]	100 [2/2]	-	100 [1/1]	-	100 [5/5]

The five SITREPs transmitted by DMAIN and 2nd Bde contained all required elements.

Q.2.2 INTSUM Completeness. Percentage of INTSUMs that contained the four elements required (unit ID, unit location, capability, and combat activity). Computation: [# of complete INTSUMs ÷ # of INTSUMs sent].

Table 41

INTSUM Completeness (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	50 [2/4]	100 [2/2]	100 [2/2]	100 [1/1]	78 [7/9]
2nd Bde		0 [0/1]	-	-	-	0 [0/1]
All	-	40 [2/5]	100 [2/2]	100 [2/2]	100 [1/1]	70 [7/10]

Most of the 10 INTSUMs transmitted by DMAIN contained all required elements. Reports that were incomplete lacked discussion of enemy unit ID and combat capabilities.

[Note: the data collected did not support computation of the following eight measures.]

O.3.1 SITREP Non-Location Accuracy. Percentage of non-location SITREP elements (unit ID, capability, and combat activity) that are correct in comparison with ground truth.

O.3.14 SITREP Location Accuracy. Median error in reported unit locations as compared to ground truth location data.

O.3.2 INTSUM Non-Location Accuracy. Percentage of non-location INTSUM elements that are correct in comparison with ground truth.

O.3.24 INTSUM Location Accuracy. Median error in reported unit locations as compared to ground truth location data.

O.4.1 SITREP Information Currency. Median age of the oldest SITREP elements at time SITREP was sent.

O.4.2 INTSUM Information Currency. Median age of the oldest INTSUM elements at time INTSUM was sent.

O.5.11 Friendly Spot Reports Queried. Percentage of friendly spot reports with missing or unclear information that are queried.

O.5.21 Enemy Spot Reports Queried. Percentage of enemy spot reports with missing or unclear information that are queried.

O.5.1 SITREP Requests for Information. Percentage of missing or unclear SITREP elements queried. Computation [# of SITREP elements queried ÷ # of SITREP elements missing or unclear].

As noted in O.2.1, the five SITREPs were complete, but the SITREP transmitted by 2nd Bde on Day 1 was queried by DTAC apparently because it contained unclear information.

O.5.2 INTSUM Requests for Information. Percentage of missing or unclear INTSUM elements queried. Computation: [# of INTSUM elements queried ÷ # of INTSUM elements missing or unclear].

As noted in O.2.2, reports that were incomplete lacked information on enemy unit ID and combat capabilities; however, these INTSUMs were never queried by the staffs of the receiving units. The fact that the division staff accepted INTSUMs on an "as-is" basis, may have caused under-estimations of the enemy situation in the division's plan development.

Q.6.1 SITREP Satisfaction. Percentage of SITREPs that require no follow-up. Computation: [# of successful SITREPs ÷ # of SITREPs transmitted].

Table 42

SITREP Satisfaction (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	100 [2/2]	-	-	-	100 [2/2]
2nd Bde	50 [1/2]	-	-	100 [1/1]	-	67 [2/3]
All	50 [1/2]	100 [2/2]	-	100 [1/1]	-	80 [4/5]

Only one of the five SITREPs transmitted by the division CPs required follow-up.

Q.6.2 INTSUM Satisfaction. Percentage of INTSUMs that require no follow-up. Computation: [# of successful INTSUMs ÷ # of INTSUMs received].

Table 43

INTSUM Satisfaction (%)

	DAY					
CP	1	2	3	4	5	AGGREGATE
DMAIN	-	100 [4/4]	100 [2/2]	100 [2/2]	100 [1/1]	100 [9/9]
2nd Bde		100 [1/1]	-	-	-	100 [1/1]
All	-	100 [5/5]	100 [2/2]	100 [2/2]	100 [1/1]	100 [10/10]

None of the ten INTSUMs required follow-up action.

[Note: the data collected did not support computation of the following eight measures.]

O.7.11 Friendly Spot Report Currency. Median age of friendly spot reports' information when transmitted.

O.7.21 Enemy Spot Report Currency. Median age of enemy spot reports' information when transmitted.

O.8.1 Friendly Spot Report Non-Location Accuracy. Percentage of friendly spot report non-location elements (identification, capability, and combat activities) that are correct in comparison with ground truth.

O.8.14 Friendly Spot Report Location Accuracy. Median error in reported unit locations as compared to ground truth location data.

O.8.2 Enemy Spot Report Accuracy. Percentage of non-location enemy spot report elements (identification, capability, and combat activities) that are correct in comparison with ground truth.

O.8.24 Enemy Spot Report Location Accuracy. Median error in reported unit locations as compared to ground truth location data.

O.9.0 Report Impact on Plans. Percentage of plan changes not directly attributable to reporting problems (errors, lack of clarity, missing elements or lack of currency).

Summary of observations related to handling of outgoing information. A lack of ACCES data in this category limits the assessment of information handling to those measures dealing with report punctuality, completeness, and satisfaction. Most INTSUMs were late, whereas most SITREPs were transmitted early or on time. All SITREPs were complete, but a follow-up was needed for one SITREP. None of the INTSUMs were queried despite the fact that some were missing one or more elements.

Category DC: Decision Context. Measures in this category focus on the decision making process in the unit. Measures include the positions of decision making authorities, the content and effects of decisions, whether contingencies were involved and what types of operations were involved.

DC.1.0 Decision Maker. Positions of individuals making decisions

As previously mentioned in IC.5.0, DMAIN was the primary CP. At this CP, the division commander made the majority of the decisions, and in his absence the G3 made the decisions. At DTAC only four decisions were recorded by ACCES observers, and for most tactical decisions the ADC-M asked the CG for a decision. However, on two occasions the ADC-M did make decisions when he was unable to contact the division commander. The division commander made 55% of all decisions at DMAIN and a number of unrecorded decisions for DTAC. Within the 2nd Bde CP, the commander and S3 together made over 75% of all decisions.

DC.2.0 Affected Units. Units that were affected by the decisions.

There were 16 different units affected by the 45 decisions made by the division commander and his staff (see Table 44 below.).

DC.3.0 Decision Focus. Elements with which decisions were concerned.

Of the 45 decisions made during the exercise, more decisions (28) focused on mission than any other element, with support (13) and schedules (12) being the next most frequent. (See Table 45 and Figure 7 below.) Due to heavy battle losses, frequent reconstitution of units occurred, and due to the congestion on the three main supply routes (MSRs) caused by movement of units to the battle area, meeting schedules became a critical factor during defensive operations.

Table 44

Affected Units

CP	DAY 1	2	3	4	5
DMAIN	DIVARTY 2 Bde	1 Bde 2 Bde AVN Bde DIVARTY XXXth Bde Eng Bn 1-XXX ADA Mi Bn Sig Bn	1 Bde 2 Bde AVN Bde DIVARTY XXXth Bde Eng Bn 1-XXX ADA Mi Bn Sig Bn	1 Bde 2 Bde AVN Bde DIVARTY XXXth Bde Eng Bn 1-XXX ADA Mi Bn Sig Bn	AVN Bn
DTAC	-	-	-	-	2 Bde DIVARTY AVN Bde
2 Bde	-	2 Bde AVN Bde INF TF INF TF	2 Bde INF TF INF TF INF TF FA	2 Bde 1 Bde	2 Bde XXXth Bde AR Bn ADA

Table 45

Decision Focus

	DMAIN	DTAC	2d BDE	AGGREGATE
Mission	13	2	13	28
Task Org	5	1	2	8
Disposition	-	-	-	-
Support	5	1	7	13
Schedules	4	-	8	12
Boundaries	3	-	2	5
Other	2	1	3	6
Unknown	-	-	2	2

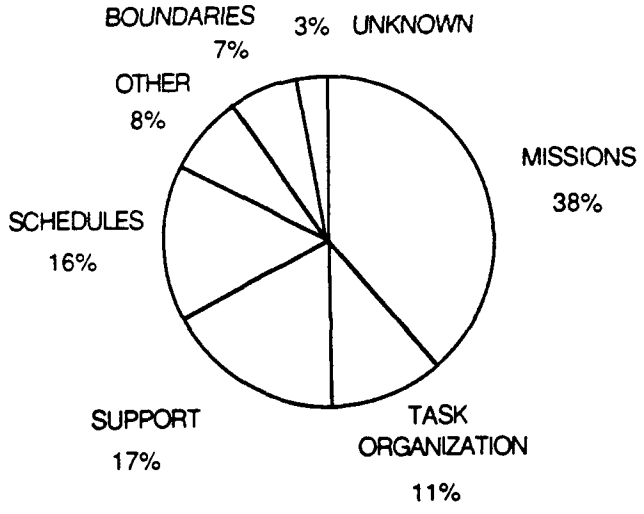


Figure 7. Decision Focus

DC.4.0 Contingency. Whether or not a contingency was activated by the decision.

Of the 45 decisions made during the exercise, five activated contingencies. There were two contingencies activated during offensive operations and three contingencies activated during defensive operations.

DC.5.0 Decision Time. Times at which the decisions were made.

At the outset of the exercise, the division implemented a pre-established operation plan (OPLAN) for conduct of offensive operations in four phases. Phase 1 involved reconnaissance/counter-reconnaissance; Phase 2 involved battle zone security; Phase 3 involved penetrating and securing a bridgehead; and Phase 4 involved passage of lines. Of the 45 decisions made during the exercise, only one was made on Day 1. This was attributable to the division's successful execution of Phase 1 of the OPLAN. On Day 2 nine decisions were made after the division made contact with the enemy. In Day 3 the division was in Phase 3 of the OPLAN and the same number of decisions were made as on Day 2. The number of decisions nearly doubled on Day 4 when the division was forced to abandon the pre-established OPLAN and assume a defensive posture.

DC.6.0 Type of Operation. The type of operation (offensive, defensive, and other) associated with each decision.

Operations were grouped into four categories (offensive, defensive, other, and unknown). See Figure 8 for breakout of the types of operations that were involved. The number of decisions associated with offensive and defensive operations were nearly evenly distributed, which reflected the changes in plans forced by situation changes.

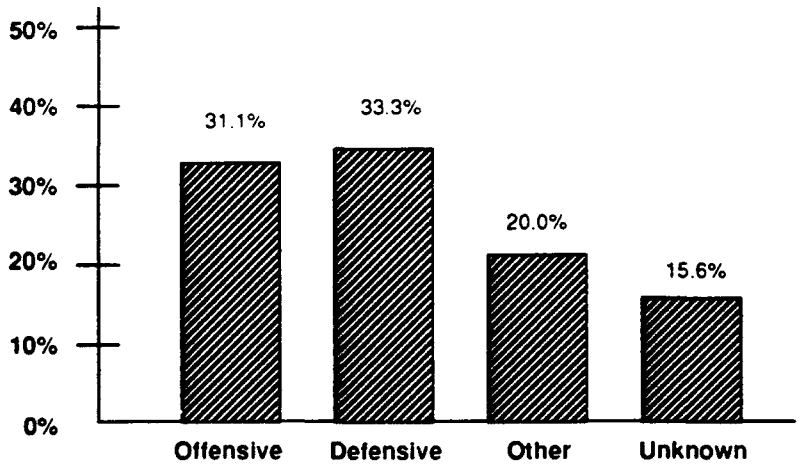


Figure 8. Types of Operations

Summary of observations related to the decision context. The principal decision maker within the division was the division commander. A majority of the decisions were focused on mission accomplishment in relation to both offensive and defensive combat operations.

Summary

The following provides a compilation of the summary comments, by ACCES measurement category, from each of the sections above.

General. Established plans implemented before the start of the exercise (STARTEX) were not evaluated for this category, but these plans did remain stable until congestion on the MSRs caused a FRAGO to be issued by DREAR to prioritize unit movement. When the division began its attack on Day 2, many plan changes were made to maintain combat power, and all plans implemented during the offensive phase were unstable. Plan stability did improve a little during the defensive phase. None of the plans implemented in the defensive phase, however, remained in effect throughout the duration of their intended lives. None of the plans implemented by the division during the exercise could be fully completed without change and none included any contingencies.

Handling of Incoming Information. Throughout the exercise, SITREPs and INTSUMs were received late. However, most of these reports contained all required elements and did not elicit any staff requests for clarification from the sender. Much of the data necessary to assess the accuracy of SITREPs and INTSUMs was impractical to obtain by the ACCES observers. Very few friendly and enemy spot reports were queried by the staff or command recipient for missing and/or unclear elements. Much of the data needed to assess measures in this category were missing, and no meaningful conclusions can be drawn about the quality of incoming information or its impact on the division's planning process.

Tracking the situation. Division staffs were able to formulate rather accurate assessments of both the friendly and enemy situations, but apparently did not use effectively enemy SAs in development of plans. Divisions staffs generally projected assessments far enough into the future to allow for thorough planning. The major weakness in the situation assessments was that they were consistently incomplete.

Maintaining information congruence. Within CPs, assessments of the friendly and enemy situations were less consistent than those of the friendly and enemy situation among CPs. Coordinations within CPs and among CPs were generally completed in a timely manner. Due to highly successful coordinations in more than 98% of the instances that could be evaluated, none of the problems in the planning process can be attributed to coordination issues.

Predicting courses of action. Personnel from different staff sections participated in the development and analyses of COAs. Not more than two COAs were considered in the development of division plans. The median time span of the COA analyses was 24 hours, which is consistent with the ability of the division to assess the friendly and enemy situations. Some of the COA analyses were inaccurate and/or were incomplete, with at least

one element omitted. The overly optimistic predictions of mission accomplishment probably contributed to the failure of division plans, particularly in the offensive.

Preparation of directives. Directive preparation involved a median of three representatives from three different staff sections. Timing of directive preparation could not be assessed because of insufficient data, but directives were expected to remain in effect for a median of 20 hours. Over 80% of the directives issued were understood by the receiving units but (based on a rather limited sample size) only 30% of them could be implemented on time.

Handling outgoing information. A lack of ACCES data in this category limits the assessment of information handling to those measures dealing with report punctuality, completeness, and satisfaction. Most INTSUMs were late, whereas most SITREPs were transmitted early or on time. All SITREPs were complete, but a follow-up was needed for one SITREP. None of the INTSUMs were queried despite the fact that some were missing one or more elements.

Decision context. The principal decision maker within the division was the division commander. A majority of the decisions were focused on mission accomplishment in relation to both offensive and defensive combat operations.

APPENDIX A

Scores for All ACCES Measures

CATEGORY G: GENERAL MEASURES

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
G.1.0	Plan Duration (median in hours) [time the plan ends minus time the plan is implemented]							
	CP:	DMAIN	-	0.8	3.2	4.8	-	3.8
		DREAR	-	6.9	-	-	-	6.9
		Division	-	3.9	3.2	4.8	-	4.2
G.1.1	Mission Duration (median in hours) [time mission assignments changed minus time mission assignments established]							
	CP:	DMAIN	-	-	13.3	-	-	13.3
G.1.2	Task Organization Duration (median in hours) [time task organization changed minus time task organization established]							
	CP:	DMAIN	-	11.9	3.2	4.0	-	4.0

CATEGORY G: GENERAL MEASURES

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
G.1.3	Schedule Duration (median in hours) [time schedule changed minus time schedule established]							
	CP:	DMAIN	-	-	29.3	-	-	29.3
		DREAR	-	7.9	-	-	-	7.9
		Division	-	7.9	29.3	-	-	19.0
G.1.4	Boundary Duration (median in hours) [time boundaries changed minus time boundaries established]							
	CP:	DMAIN	-	-	3.6	-	-	3.6
G.2.0	Plan Stability (%) [total plan duration/ total intended plan life]							
	CP:	DMAIN	-	4 [.8/20]	7 [5.2/60]	14 [8.6/60]	-	10 [14.6/140]

CATEGORY G: GENERAL MEASURES

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
G.2.1	Mission Assignment Stability (%) [total mission assignment duration/total intended plan life]						
	CP: DMAIN	-	-	19 [9.1/48]	-	-	19 [9.1/48]
G.2.2	Task Organization Stability (%) [total task organization duration/total intended plan life]						
	CP: DMAIN	-	60 [11.9/20]	9 [5.2/60]	14 [8.6/60]	-	18 [25.7/140]
G.2.3	Schedule Stability (%) [total schedule duration/ total intended plan life]	-	-	-	-	-	-
G.2.4	Boundary Stability (%) [total boundary duration/ total intended plan life]						
	CP: DMAIN	-	-	8 [3.6/48]	-	-	8 [3.6/48]

CATEGORY G: GENERAL MEASURES

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
G.3.0	Planning Effectiveness (%) [# of plan elements surviving/total # of plan elements]							
	CP:	DMAIN	-	75 [3/4]	60 [12/20]	50 [4/8]	-	59 [19/32]
		DREAR	-	75 [3/4]	-	-	-	75 [3/4]
		Division	-	75 [6/8]	60 [12/20]	50 [4/8]	-	61 [22/36]
G.4.0	Planning Success (%) [# of dominant and adaptive plans/ total # of plans]							
	CP:	DMAIN	-	0 [0/1]	0 [0/5]	0 [0/2]	-	0 [0/8]
		DREAR	-	0 [0/1]	-	-	-	0 [0/1]
		Division	-	0 [0/2]	0 [0/5]	0 [0/2]	-	0 [0/9]
G.5.0	Planning Initiative (%) [# of proactive and contingency directives/ total # of directives]							
	CP:	DMAIN	-	100 [3/3]	100 [3/3]	50 [2/4]	100 [1/1]	82 [9/11]
		DTAC	-	0 [0/2]	-	-	-	0 [0/2]
		2d Bde	100 [1/1]	100 [1/1]	-	-	100 [1/1]	100 [3/3]
		Division	100 [1/1]	67 [4/6]	100 [3/3]	50 [2/4]	100 [2/2]	75 [12/16]

CATEGORY G: GENERAL MEASURES

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
G.6.0	C2 Planning Cycle Time (median in hours) [time directive issued minus time stimulus perceived]						
	CP: DMAIN	-	6.7	6.1	4.1	7.4	5.8
G.6.1	Low Planning Stress Cycle Time (median in hours) [planning cycle time]	-	-	-	-	-	-
G.6.2	Moderate Planning Stress Cycle Time (median in hours) [planning cycle time]	-	-	-	-	-	-
G.6.3	High Planning Stress Cycle Time (median in hours) [planning cycle time]						
	CP: DMAIN	-	6.7	6.1	4.1	7.4	5.8

CATEGORY I: INCOMING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
I.1.1	Friendly Status Report (FSR) Received [number of reports received]							
	CP:	DMAIN	1	5	1	1	-	8
		DTAC	-	1	1	-	4	6
		DREAR	1	-	-	-	-	1
		Division	2	6	2	1	4	15
I.1.11	FSR Punctuality (%) [# of FSRs received early or on time/ total # of FSRs received]							
	CP:	DMAIN	0 [0/1]	40 [2/5]	100 [1/1]	0 [0/1]	-	38 [3/8]
		DTAC	-	0 [0/1]	100 [1/1]	-	50 [2/4]	50 [3/6]
		DREAR	0 [0/1]	-	-	-	-	0 [0/1]
		Division	0 [0/2]	33 [2/6]	100 [2/2]	0 [0/1]	50 [2/4]	40 [6/15]
I.1.12	Timing of Punctual Reports (median in hours) [time due minus time received]							
	CP:	DMAIN	-	.2 {2|0}	.9 {1|0}	-	-	.3 {3|0}
		DTAC	-	-	.3 {1|0}	-	.2 {2|1}	.2 {3|1}
		Division	-	.2 {2|0}	.6 {2|0}	-	.2 {2|1}	0.25 {6|1}

CATEGORY I: INCOMING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
I.1.13	FSR Lateness (%) [# of FSRs received late/total # of FSRs received]							
	CP:	DMAIN	100 [1/1]	60 [3/5]	0 [0/1]	100 [1/1]	-	63 [5/8]
		DTAC	-	100 [1/1]	0 [0/1]	-	50 [2/4]	50 [3/6]
		DREAR	100 [1/1]	-	-	-	-	100 [1/1]
		Division	100 [2/2]	67 [4/6]	0 [0/2]	100 [0/1]	50 [2/4]	60 [9/15]
I.1.14	Timing of Late Reports (median in hours) [time received minus time due]							
	CP:	DMAIN	1.6 {1|0}	2.5 {3|0}	-	3.4 {1|0}	-	2.5 {5|0}
		DTAC	-	3.7 {1|0}	-	-	1.8 {2|0}	2. 5 {3|0}
		DREAR	2.5 {1|0}	-	-	-	-	2. 5 {1|0}
		Division	2.0 {2|0}	3.1 {4|0,	-	3.4 {1|0}	1.8 [2|0}	2.5 {9|0}
I.1.15	FSR Transmission Time (median in hours) [time received minus time sent]		-	-	-	-	-	-

CATEGORY I: INCOMING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
I.1.2	Enemy Intelligence Summary (INTSUM) Received [number of reports in a selected period of time]							
	CP:	DMAIN	1	4	-	1	-	6
		DREAR	-	3	-	-	-	3
		Division	1	7	-	1	-	9
I.1.21	INTSUM Punctuality (%) [# of INTSUMs received early or on time/total # of INTSUMs received]							
	CP:	DMAIN	0 [0/1]	25 [1/4]	-	0 [0/1]	-	17 [1/6]
		DREAR	-	0 [0/3]	-	-	-	0 [0/3]
		Division	0 [0/1]	14 [1/7]	-	0 [0/1]	-	11 [1/9]
I.1.22	Timing of Punctual Reports (median in hours) [time due minus time received]							
	CP:	DMAIN	12.7 {1|0}	14.2 {3|0}	-	12.2 {1|0}	-	13.1 {5|0}
		DREAR	-	13.3 {3|0}		-	-	13.3 {3|0}
		Division	12.7 {1|0}	13.4 {6|0}		12.2 {1|0}	-	13.2 {8|0}

CATEGORY I: INCOMING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
I.1.23	INTSUM Lateness (%) [# of INTSUMs received late/total # of INTSUMs received]							
	CP:	DMAIN	100 [1/1]	75 [3/4]	-	100 [1/1]	-	83 [5/6]
		DREAR	-	100 [3/3]	-	-	-	100 [3/3]
		Division	100 [1/1]	86 [6/7]	-	100 [1/1]	-	89 [8/9]
I.1.24	Timing of Late Reports (median in hours) [time received minus time due]							
	CP:	DMAIN	12.7 {1|0}	14.2 {3|0}	-	12.2 {1|0}	-	13.5 {5|0}
		DREAR	-	13.3 {3|0}	-	-	-	13.3 {3|0}
		Division	12.7 {1|0}	13.4 {6|0}	-	12.2 {1|0}	-	13.2 {8|0}
I.1.25	INTSUM Transmission Time (median in hours) [time received minus time sent]							
	CP:	DMAIN	1.7 {1|0}	-	-	-	-	1.7 {1|0}

CATEGORY I: INCOMING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
I.2.1	FSR Completeness (%) [# of complete FSRs/ total # of FSRs received]							
	CP:	DMAIN	100 [1/1]	80 [4/5]	100 [1/1]	100 [1/1]	-	88 [7/8]
		DTAC	-	100 [1/1]	100 [1/1]	-	50 [2/4]	80 [4/6]
		DREAR	100 [1/1]	-	-	-	-	100 [1/1]
		Division	100 [2/2]	83 [5/6]	100 [2/2]	100 [1/1]	50 [2/4]	80 [12/15]
I.2.11	FSR Unit Completeness (%) [# of FSRs identifying units/total # of FSRs received]							
	CP:	DMAIN	100 [1/1]	100 [5/5]	100 [1/1]	100 [1/1]	-	100 [8/8]
		DTAC	-	100 [1/1]	100 [1/1]	-	100 [4/4]	100 [6/6]
		DREAR	100 [1/1]	-	-	-	-	100 [1/1]
		Division	100 [2/2]	100 [6/6]	100 [2/2]	100 [1/1]	100 [4/4]	100 [15/15]
I.2.12	FSR Location Completeness (%) [# of FSRs identifying locations/total # of FSRs received]							
	CP:	DMAIN	100 [1/1]	100 [5/5]	100 [1/1]	100 [1/1]	-	100 [8/8]
		DTAC	-	100 [1/1]	100 [1/1]	-	75 [3/4]	83 [5/6]
		DREAR	100 [1/1]	-	-	-	-	100 [1/1]
		Division	100 [2/2]	100 [6/6]	100 [2/2]	100 [1/1]	75 [3/4]	93 [14/15]

CATEGORY I: INCOMING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
I.2.13	FSR Capability Completeness (%) [# of FSRs identifying locations/total # of FSRs received]							
	CP:	DMAIN	100 [1/1]	100 [5/5]	100 [1/1]	100 [1/1]	-	100 [8/8]
		DTAC	-	100 [1/1]	100 [1/1]	-	50 [2/4]	67 [4/6]
		DREAR	100 [1/1]	-	-	-	-	100 [1/1]
		Division	100 [2/2]	100 [6/6]	100 [2/2]	100 [1/1]	50 [2/4]	87 [13/15]
I.2.14	FSR Activity Completeness (%) [# of FSRs identifying activity/total # of FSRs received]							
	CP:	DMAIN	100 [1/1]	80 [4/5]	100 [1/1]	100 [1/1]	-	88 [7/8]
		DTAC	-	100 [1/1]	100 [1/1]	-	100 [4/4]	100 [6/6]
		DREAR	100 [1/1]	-	-	-	-	100 [1/1]
		Division	100 [2/2]	83 [5/6]	100 [2/2]	100 [1/1]	100 [4/4]	93 [14/15]
I.2.2	INTSUM Completeness (%) [# of complete INTSUMs/ total # of INTSUMs received]							
	CP:	DMAIN	100 [1/1]	100 [4/4]	-	100 [1/1]	-	100 [6/6]
		DREAR	-	100 [3/3]	-	-	-	100 [3/3]
		Division	100 [1/1]	100 [7/7]	-	100 [1/1]	-	100 [9/9]

CATEGORY I: INCOMING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
I.2.21	INTSUM Unit Completeness (%) [# of INTSUMs identifying units/total # of INTSUMs received]							
	CP:	DMAIN	100 [1/1]	100 [4/4]	-	100 [1/1[	-	100 [6/6]
		DREAR	-	100 [3/3]	-	-	-	100 [3/3]
		Division	100 [1/1]	100 [7/7]	-	100 [1/1]	-	100 [9/9]
I.2.22	INTSUM Location Completeness (%) [# of INTSUMs identifying location/total # of INTSUMs received]							
	CP:	DMAIN	100 [1/1]	100 4/4]	-	100 [1/1]	-	100 [6/6]
		DREAR	-	100 [3/3]	-	-	-	100 [3/3]
		Division	100 [1/1]	100 [7/7]	-	100 [1/1]	-	100 [9/9]
I.2.23	INTSUM Capability Completeness (%) [# of INTSUMs identifying capability/total # of INTSUMs received]							
	CP:	DMAIN	100 [1/1]	100 [4/4]	-	100 [1/1]	-	100 [6/6]
		DREAR	-	100 [3/3]	-	-	-	100 [3/3]
		Division	100 [1/1]	100 [7/7]	-	100 [1/1]	-	100 [9/9]
I.2.24	INTSUM Activity Completeness (%) [# of INTSUMs identifying activity/total # of INTSUMs received]							
	CP:	DMAIN	100 [1/1]	100 [4/4]		100 [1/1]		100 [6/6]
		DREAR	-	100 [3/3]	-	-	-	100 [3/3]
		Division	100 [1/1]	100 [7/7]	-	100 [1/1]	-	100 [9/9]

CATEGORY I: INCOMING INFORMATION HANDLING

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
I.3.1	FSR Non-Location Accuracy (%) [# of elements correctly reported/total # of elements]	-	-	-	-	-	-
I.3.11	FSR Identification Accuracy (%) [# of units correctly identified/ total # of units]	-	-	-	-	-	-
I.3.12	FSR Capability Accuracy (%) [# of units whose capabilities are correctly reported/total # of units]	-	-	-	-	-	-
I.3.13	FSR Activity Accuracy (%) [# of units whose activities are correctly reported/total # of units]	-	-	-	-	-	-
I.3.14	FSR Location Accuracy (median error in km) [distance of (location reported versus ground truth location)]	-	-	-	-	-	-
I.3.2	INTSUM Non-Location Accuracy (%) [# of elements correctly reported/total # of elements]	-	-	-	-	-	-
I.3.21	INTSUM Identification Accuracy (%) [# of units correctly identified/total # of units]	-	-	-	-	-	-

CATEGORY I: INCOMING INFORMATION HANDLING

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
I.3.22	INTSUM Capability Accuracy (%) [# of units whose capabilities are correctly reported/total # of units]	-	-	-	-	-	-
I.3.23	INTSUM Activity Accuracy (%) [# of units whose activities are correctly reported/total # of units]	-	-	-	-	-	-
I.3.24	INTSUM Location Accuracy (median error in km) [distance of (location reported versus ground truth location)]	-	-	-	-	-	-
I.4.1	FSR Information Currency (median in hours) [time when the report was sent minus time of the oldest report element]	-	-	-	-	-	-
I.4.2	INTSUM Information Currency (median in hours) [time of the report when sent minus time of the oldest report element]	-	-	-	-	-	-

CATEGORY I: INCOMING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
I.5.1	FSR Requests for Information (%) [# of elements queried/ # of elements missing or unclear]		-	-	-	-	-	-
I.5.11	FSR Requests for Identification (%) [# of identifications queried/ total # of missing or unclear identifications]		-	-	-	-	-	-
I.5.12	FSR Requests for Capabilities (%) [# of capabilities queried/ total # of missing or unclear capabilities]		-	-	-	-	-	-
I.5.13	FSR Requests for Combat Activity (%) [# of activities queried/ total # of missing or unclear activities]		-	-	-	-	-	-
I.5.14	FSR Requests for Location (%) [# of locations queried/ total # of missing or unclear locations]		-	-	-	-	-	-
I.5.15	Friendly Spot Reports Queried (%) [# of friendly spot reports queried/total # of friendly spot reports with missing or unclear information]							
	CP:	DMAIN	13 [1/8]	0 [0/12]	0 [0/3]	0 [0/1]	100 [1/1]	8 [2/25]
		DTAC	25 [1/4]	13 [1/8]	0 [0/3]	0 [0/1]	0 [0/1]	9 [2/17]
		DREAR	-	0 [0/2]	50 [2/4]	0 [0/5]	0 [0/3]	0 [2/14]
		2d Bde	50 [1/2]	-	-	-	100 [1/1]	67 [2/3]
		Division	21 [3/14]	5 [1/22]	20 [2/10]	0 [0/7]	33 [2/6]	14 [8/59]

CATEGORY I: INCOMING INFORMATION HANDLING

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
I.5.2	INTSUM Requests for Information (%) [# of elements queried/# of elements missing or unclear]	-	-	-	-	-	-
I.5.21	INTSUM Requests for Information (%) [# of identifications queried/ total # of missing or unclear information]	-	-	-	-	-	-
I.5.22	INTSUM Requests for Capabilities (%) [# of capabilities queried/ total # of missing or unclear capabilities	-	-	-	-	-	-
I.5.23	INTSUM Requests for Combat Activity (%) [# of activities queried/ total # of missing or unclear activities]	-	-	-	-	-	-
I.5.24	INTSUM Requests for Location (%) [# of locations queried/ total # of missing or unclear locations]	-	-	-	-	-	-
I.5.25	Enemy Spot Reports Queried (%) [# enemy spot reports queried/total # of reports with missing or unclear information]						
	CP: DMAIN	0 [0/4]	11.0 [1/9]	0 [0/1]	0 [0/4]	25.0 [1/4]	9.0 [2/22]
	DTAC	-	0 [0/1]	0 [0/3]	7.0 [1/14]	0 [0/8]	4.0 [1/26]
	DREAR	0 [0/6]	0 [0/15]	8.0 [1/13]	0 [0/10]	0 [0/4]	2.0 [1/48]
	2d Bde	0 [0/1]	0 [0/4]	0 [0/4]	0 [0/5]	-	0 [0/14]
	Division	0 [0/11]	7.0 [2/29]	5.0 [1/21]	3.0 [1/33]	6.0 [1/16]	4.0 [4/110]

CATEGORY I: INCOMING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
I.6.1	FSR Satisfaction (%) [# of FSRs requiring no follow-up/total # of FSRs received]							
	CP:	DMAIN	100 [1/1]	100 [5/5]	100 [1/1]	100 [1/1]	-	100 [13/13]
		DTAC	-	100 [1/1]	100 [1/1]	-	100 [4/4]	100 [6/6]
		DREAR	100 [1/1]	-	-	-	-	100 [1/1]
		Division	100 [2/2]	100 [6/6]	100 [2/2]	100 [1/1]	100 [4/4]	100 [15/15]
I.6.2	INTSUM Satisfaction (%) [# of INTSUMs requiring no follow-up/total # of INTSUMs received]							
	CP:	DMAIN	100 [1/1]	100 [4/4]	-	100 [1/1]	-	100 [6/6]
		DREAR	-	100 [3/3]	-	-	-	100 [3/3]
		Division	100 [1/1]	100 [7/7]	-	100 [1/1]	-	100 [9/9]
I.7.11	Friendly Spot Report Currency (median in hours) [time stimulus perceived minus time report sent]							
	CP:	DTAC	-	-	.8 {1|0}	-	-	.8 {1|0}

CATEGORY I: INCOMING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
I.7.12	Friendly Spot Report Transmission Time (median in hours) [time report received minus time report sent]		-	-	-	-	-	-
I.7.13	Friendly Spot Report Perception Time (median in hours) [time received minus time perceived]							
	CP:	DTAC	-	-	.8 {1|0}	-	-	.8 {1|0}
		DREAR	-	-	.9 {1|0}	-	-	.9 {1|0}
		Division	-	-	.9 {2|0}	-	-	.9 {2|0}
I.7.14	Friendly Spot Report Speed (median in hours) [time received minus time stimulus perceived]							
	CP:	DTAC	-	-	.8 {1|0}	-	-	.8 {1|0}
		DREAR	-	-	.9 {1|0}	-	-	.9 {1|0}
		Division	-	-	.9 {2|0}	-	-	.9 {2|0}
I.7.21	Enemy Spot Report Currency (median in hours) [time stimulus perceived minus time report sent]		-	-	-	-	-	-
I.7.22	Enemy Spot Report Transmission Time (median in hours) [time report received minus time report sent]		-	-	-	-	-	-

CATEGORY I: INCOMING INFORMATION HANDLING

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
I.7.23	Enemy Spot Report Perception Time (median in hours) [time received minus time perceived]	-	-	-	-	-	-
I.7.24	Enemy Spot Report Speed (median in hours) [time received minus time stimulus perceived]	-	-	-	-	-	-
I.8.1	Friendly Spot Report Non-Location Accuracy (%) [# of elements currently reported/total # of elements]	-	-	-	-	-	-
I.8.11	Friendly Spot Report Identification Accuracy (%) [# of units correctly identified/total # of units]	-	-	-	-	-	-
I.8.12	Friendly Spot Report Capability Accuracy (%) [# of units whose capabilities are correctly identified/ total # of units]	-	-	-	-	-	-
I.8.13	Friendly Spot Report Combat Activities Accuracy (%) [# of units whose activities are correctly reported/ total # of units]	-	-	-	-	-	-
I.8.14	Friendly Spot Report Location Accuracy (median error in km) [distance of (location reported versus ground truth location)]	-	-	-	-	-	-
I.8.2	Enemy Spot Report Non-Location Accuracy (%) [# of elements currently reported/total # of elements]	-	-	-	-	-	-

CATEGORY I: INCOMING INFORMATION HANDLING

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
I.8.21	Enemy Spot Report Capability Accuracy (%) [# of units whose capabilities are correctly identified/ total # of units]	-	-	-	-	-	-
I.8.22	Enemy Spot Report Combat Activities Accuracy (%) [# of units whose activities are correctly reported/ total # of units]	-	-	-	-	-	-
I.8.23	Enemy Spot Report Combat Activities Accuracy (%) [# of units whose activities are correctly reported/ total # of units]	-	-	-	-	-	-
I.8.24	Enemy Spot Report Location Accuracy (median error in km) [distance of (location reported versus ground truth location)]	-	-	-	-	-	-
I.9.11	Weather and Terrain Report Currency (median in hours) [time stimulus received minus time report sent]	-	-	-	-	-	-
I.9.12	Weather and Terrain Report Transmission Time (median in hours) [time stimulus received minus time report sent]	-	-	-	-	-	-
I.9.13	Weather and Terrain Report Punctuality (median in hours) [time perceived minus time received]	-	-	-	-	-	-

CATEGORY I: INCOMING INFORMATION HANDLING

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
I.9.14	Weather and Terrain Report Speed (median in hours) [time received minus time stimulus perceived]	-	-	-	-	-	-
I.9.2	Weather and Terrain Report Accuracy (%) [# of elements correctly reported/total # of elements]	-	-	-	-	-	-
I.10.0	Report Impact on Plan (%) [# of plan changes not due to report problems/total # of plan changes]	-	-	-	-	-	-

CATEGORY T: TRACKING THE SITUATION MEASURES

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
T.1.1	Completeness of the Assessments of the Friendly Situation (%) [# of complete FSAs/ # of formal FSAs]							
	CP:	DMAIN	50 [1/2]	40 [2/5]	0 [0/3]	33 [1/3]	0 [0/2]	27 [4/15]
		DTAC	0 [0/5]	33 [1/3]	33 [1/3]	0 [0/2]	0 [0/1]	14 [2/14]
		DREAR	-	50 [1/2]	100 [1/1]	-	-	67 [2/3]
		2d Bde	0 [0/2]	-	-	-	-	0 [0/2]
		Division	11 [1/9]	40 [4/10]	29 [2/7]	20 [1/5]	0 [0/3]	24 [8/34]
T.1.11	Friendly Mission Completeness (%) [# of formal FSAs discussing mission/# of formal FSAs]							
	CP:	DMAIN	100 [2/2]	60 [3/5]	67 [2/3]	33 [1/3]	50 [1/2]	60 [9/15]
		DTAC	80 [4/5]	67 [2/3]	67 [2/3]	50 [1/2]	0 [0/1]	64 [9/14]
		DREAR	-	100 [2/2]	100 [1/1]	-	-	100 [3/3]
		2d Bde	50 [1/2]	-	-	-	-	50 [1/2]
		Division	78 [7/9]	70 [7/10]	71 [5/7]	40 [2/5]	33 [1/3]	65 [22/34]

CATEGORY T: TRACKING THE SITUATION MEASURES

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
T.1.12	Friendly Task Organization Completeness (%) [# of formal FSAs discussing task organization/ # of formal FSAs]						
CP:	DMAIN	50 [1/2]	80 [4/5]	100 [3/3]	100 [3/3]	0 [0/2]	73 [11/15]
	DTAC	20 [1/5]	33 [1/3]	67 [2/3]	50 [1/2]	0 [0/1]	36 [5/14]
	DREAR	-	50 [1/2]	100 [1/1]	-	-	67 [2/3]
	2d Bde	50 [1/2]	-	-	-	-	50 [1/2]
	Division	33 [3/9]	60 [6/10]	86 [6/7]	80 [4/5]	0 [0/3]	56 [19/34]
T.1.13	Friendly Disposition Completeness (%) [# of formal FSAs discussing disposition/# of formal FSAs]						
CP:	DMAIN	50 [1/2]	80 [4/5]	33 [1/3]	67 [2/3]	100 [2/2]	67 [10/15]
	DTAC	60 [3/5]	67 [2/3]	33 [1/3]	100 [2/2]	0 [0/1]	50 [7/14]
	DREAR	-	50[1/2]	100 [1/1]	-	-	67 [2/3]
	2d Bde	100 [2/2]	-	-	-	-	100 [2/2]
	Division	67 [6/9]	70 [7/10]	43 [3/7]	80 [4/5]	67 [2/3]	65 [22/34]

CATEGORY T: TRACKING THE SITUATION MEASURES

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
T.1.14	Friendly Activities Completeness (%) [# of formal FSAs discussing activities/# of formal FSAs]							
	CP:	DMAIN	50 [1/2]	100 [5/5]	100 [3/3]	100 [3/3]	100 [2/2]	93 [14/15]
		DTAC	60 [3/5]	100 [3/3]	67 [2/3]	50 [1/2]	100 [1/1]	71 [10/14]
		DREAR	-	100 [2/2]	100 [1/1]	-	-	100 [3/3]
		2d Bde	100 [2/2]	-	-	-	-	100 [2/2]
		Division	67 [6/9]	100 [10/10]	86 [6/7]	80 [4/5]	100 [3/3]	85 [29/34]
T.1.15	Friendly Status Completeness (%) [# of formal FSAs discussing status/# of formal FSAs]							
	CP:	DMAIN	100 [2/2]	80 [4/5]	67 [2/3]	100 [3/3]	50 [1/2]	80 [12/15]
		DTAC	20 [1/5]	100 [3/3]	100 [3/3]	100 [2/2]	100 [1/1]	71 [10/14]
		DREAR	-	100 [2/2]	100 [1/1]	-	-	100 [3/3]
		2d Bde	100 [2/2]	-	-	-	-	100 [2/2]
		Division	56 [5/9]	90 [9/10]	86 [6/7]	100 [5/5]	67 [2/3]	79 [27/34]

CATEGORY T: TRACKING THE SITUATION MEASURES

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
T.1.16	Friendly Combat Service Support Completeness (%) [# of formal FSAs discussing CSS/# of formal FSAs]						
CP:	DMAIN	50 [1/2]	20 [1/5]	33 [1/3]	67 [2/3]	50 [1/2]	40 [6/15]
	DTAC	40 [2/5]	67 [2/3]	50 [1/3]	0 [0/2]	0 [0/1]	36 [5/14]
	DREAR	-	501/2]	100 [1/1]	-	-	67 [2/3]
	2d Bde	0 [0/2]	-	-	-	-	0 [0/2]
	Division	33 [3/9]	40 [4/10]	49 [3/7]	40 [2/5]	33 [1/3]	38 [13/34]
T.1.2	Completeness of the Assessment of the Enemy Situation (%) [# of complete formal ESAs/ # of formal ESAs conducted]						
CP:	DMAIN	0 [0/2]	50 [1/2]	33 [1/3]	0 [0/2]	-	22 [2/9]
	DTAC	0 [0/2]	-	-	-	-	0 [0/2]
	DREAR	-	-	-	-	100 [1/1]	100 [1/1]
	2d Bde	-	-	-	0 [0/1]	-	0 [0/1]
	Division	0 [0/4]	50 [1/2]	33 [1/3]	0 [0/3]	100 [1/1]	23 [3/13]

CATEGORY T: TRACKING THE SITUATION MEASURES

MEASURES			DAY					
NUMBER		TITLE	1	2	3	4	5	AGGREGATE
T.1.21	Enemy Composition Completeness (%) [# of formal ESAs discussing composition/ # of formal ESAs]							
	CP:	DMAIN	100 [2/2]	100 [2/2]	67 [2/3]	0 [0/2]	-	67 [6/9]
		DTAC	50 [1/2]	-	-	-	-	50 [1/2]
		DREAR	-	-	-	-	100 [1/1]	100 [1/1]
		2d Bde	-	-	-	0 [0/1]	-	0 [0/1]
		Division	75 [3/4]	100 [2/2]	67 [2/3]	0 [0/3]	100 [1/1]	62 [8/13]
T.1.22	Enemy Disposition Completeness (%) [# of formal ESAs discussing disposition/ # of formal ESAs]							
	CP:	DMAIN	100 [2/2]	100 [2/2]	100 [3/3]	50 [1/2]	-	89 [8/9]
		DTAC	50 [1/2]	-	-	-	-	50 [1/2]
		DREAR	-	-	-	-	100 [1/1]	100 [1/1]
		2d Bde	-	-	-	-	100 [1/1]	100 [1/1]
		Division	75 [3/4]	100 [2/2]	100 [3/3]	50 [1/2]	100 [2/2]	85 [11/13]

CATEGORY T: TRACKING THE SITUATION MEASURES

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
T.1.23	Enemy Combat Power Completeness (%) [# of formal ESAs discussing combat power/# of formal ESAs]						
CP:	DMAIN	50 [1/2]	100 [2/2]	67 [2/3]	0 [0/2]	-	56 [5/9]
	DTAC	100 [2/2]	-	-	-	-	100 [2/2]
	DREAR	-	-	-	-	100 [1/1]	100 [1/1]
	2d Bde	-	-	-	100 [1/1]	-	100 [1/1]
	Division	75 [3/4]	100 [2/2]	67 [2/3]	33 [1/3]	100 [1/1]	69 [9/13]
T.1.24	Enemy Activities Completeness (%) [# of formal ESAs discussing activities/# of formal ESAs]						
CP:	DMAIN	100 [2/2]	100 [2/2]	100 [3/3]	100 [2/2]	-	100 [9/9]
	DTAC	100 [2/2]	-	-	-	-	100 [2/2]
	DREAR	-	-	-	-	100 [1/1]	100 [1/1]
	2d Bde	-	-	-	100 [1/1]	-	100 [1/1]
	Division	100 [4/4]	100 [2/2]	100 [3/3]	100 [3/3]	100 [1/1]	100 [13/13]

CATEGORY T: TRACKING THE SITUATION MEASURES

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
T.1.25	Enemy Course of Action Completeness (%) [# of formal ESAs discussing COAs/# of formal ESAs]							
	CP:	DMAIN	0 [0/2]	50 [1/2]	67 [2/3]	50 [1/2]	-	44 [4/9]
		DTAC	50 [1/2]	-	-	-	-	50 [1/2]
		DREAR	-	-	-	-	100 [1/1]	100 [1/1]
		2d Bde	-	-	-	-	100 [1/1]	100 [1/1]
		Division	25 [1/4]	50 [1/2]	67 [2/3]	50 [1/2]	100 [2/2]	54 [7/13]
T.2.1	Accuracy of Assessments of the Friendly Situtation (%) [# of correct and not incorrect assessments/total # of evaluated assessments]							
	CP:	DMAIN	-	100 [5/5]	100 [2/2]	100 [2/2]	-	100 [9/9]
		DTAC	100 [4/4]	100 [2/2]	100 [4/4]	100 [2/2]	100 [1/1]	100 [13/13]
		DREAR	-	-	100 [3/3]	100 [2/2]	-	100 5/5]
		Division	100 [4/4]	100 [7/7]	100 [9/9]	100 [6/6]	100 [1/1]	100 [27/27]

CATEGORY T: TRACKING THE SITUATION MEASURES

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
T.2.11	Accuracy of Assessments about the Friendly Situtation That Are Correct (%) [# of correct assessments/total # of evaluated assessments]							
	CP:	DMAIN	-	100 [5/5]	100 [2/2]	100 [2/2]	-	100 [9/9]
		DTAC	100 [4/4]	100 [2/2]	100 [4/4]	100 [2/2]	100 [1/1]	100 [13/13]
		DREAR	-	-	100 [3/3]	100 [2/2]	-	100 [5/5]
		Division	100 [4/4]	100 [7/7]	100 [9/9]	100 [6/6]	100 [1/1]	100 [27/27]
T.2.12	Accuracy of Assessments about the Friendly Situtation That Are Not Incorrect (%) [# of not incorrect assessments/ total # of evaluated assessments]		-	-	-	-	-	-
T.2.13	Accuracy of Assessments about the Friendly Situtation That Incorrect (%) [# of incorrect assessments/ total # of evaluated assessments]		-	-	-	-	-	-
T.2.2	Accuracy of Assessments of the Enemy Situation (%) [# of correct and not incorrect assessments/total # of evaluated assessments]							
	CP:	DMAIN	-	75 [3/4]	100 [4/4]	67 [2/3]	-	82 [9/11]
		DTAC	0 [0/1]	100 [3/3]	67 [2/3]	100 [2/2]	-	78 [7/9]
		DREAR	-	-	-	100 [1/1]	100 [2/2]	100 [3/3]
		2d Bde	-	-	100 [1/1]	100 [1/1]	-	100 [2/2]
		Division	0 [0/1]	86 [6/7]	88 [7/8]	86 [6/7]	100 [2/2]	84 [21/25]

CATEGORY T: TRACKING THE SITUATION MEASURES

MEASURES			DAY				
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
T.2.21	Accuracy of Assessments about the Enemy Situation That Are Correct (%) [# of correct assessments/total # of evaluated assessments]							
	CP:	DMAIN	-	75 [3/4]	100 [4/4]	67 [2/3]	-	82 [9/11]
		DTAC	0 [0/1]	67 [2/3]	67 [2/3]	50 [1/2]	-	56 [5/9]
		DREAR	-	-	-	100 [1/1]	100 [2/2]	100 [3/3]
		2d Bde	-	-	100 [1/1]	0 [0/1]	-	50 [1/2]
		Division	0 [0/1]	71 [5/7]	88 [7/8]	57 [4/7]	100 [2/2]	72 [18/25]
T.2.22	Accuracy of Assessments about the Enemy Situation That Are Not Incorrect (%) [# of not incorrect assessments/ total # of evaluated assessments]							
	CP:	DMAIN	-	0 [0/4]	0 [0/4]	0 [0/3]	-	0 [0/11]
		DTAC	0 [0/1]	33 [1/3]	0 [0/3]	50 [1/2]	-	22 [2/9]
		DREAR	-	-	-	0 [0/1]	0 [0/2]	0 [0/3]
		2d Bde	-	-	0 [0/1]	100 [1/1]	-	50 [1/2]
		Division	0 [0/1]	14 [1/7]	0 [0/8]	29 [2/7]	0 [0/2]	12 [3/25]

CATEGORY T: TRACKING THE SITUATION MEASURES

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
T.2.23	Accuracy of Assessments About the Enemy Situation That Are Incorrect (%) [# of incorrect assessments/total # of evaluated assessments]							
	CP:	DMAIN	-	25 [1/4]	0 [0/4]	33 [1/3]	-	18 [2/11]
		DTAC	100 [1/1]	0 [0/3]	33 [1/3]	0 [0/2]	-	22 [2/9]
		DREAR	-	-	-	0 [0/1]	0 [0/2]	0 [0/3]
		2d Bde	-	-	0 [0/1]	0 [0/1]	-	0 [0/2]
		Division	100 [1/1]	14 [1/7]	13 [1/8]	14 [1/7]	0 [0/2]	16 [4/25]
T.3.0	Time Span of Assessments (median in hours) [end of period assessments covers minus the time the assessment is expressed]							
	CP:	DMAIN	18.0	72.0	36.0	24.0	24.0	24.0
		DTAC	1.5	3 .0	36.0	12.5	13.5	4.5
		DREAR	-	-	-	11.8	-	11.8
		2d Bde	-	2.5	10.7	10.8	12.0	6.8
		Division	2.0	3 .0	30.0	12.0	18.0	12.0
T.4.0	Assessments Impact on Plans (%) [# of changes not due to the quality of SAs/total # of plan changes]		-	-	-	-	-	-

CATEGORY IC: INFORMATION CONGRUENCE

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
IC.1.0	Intra-Command Post (CP) Agreement on the Battlefield Picture (%) [# of SA information pairs in agreement/total # of possible pairs]							
	CP:	DMAIN	67 [2/3]	67 [2/3]	-	-	-	67 [4/6]
		DTAC	33 [1/3]	-	-	100 [1/1]	-	50 [2/4]
		2d Bde	-	-	0 [0/5]	-	-	0 [0/5]
		Division	50 [3/6]	67 [2/3]	0 [0/5]	100 [1/1]	-	40 [6/15]
IC.1.1	Intra-CP Agreement on Friendly Battlefield Picture (%) [# of friendly SA information pairs in agreement/total # of possible pairs]							
	CP:	DMAIN	100 [1/1]	67 [2/3]	-	-	-	75 [3/4]
		DTAC	100 [1/1]	-	-	-	-	100 [1/1]
		Division	100 [2/2]	67 [2/3]	-	-	-	80 [4/5]
IC.1.2	Intra-CP Agreement on Enemy Battlefield Picture (%) [# of enemy SA information pairs in agreement/total # of possible pairs]							
	CP:	DMAIN	50 [1/2]	-	-	-	-	50 [1/2]
		DTAC	0 [0/2]	-	-	100 [1/1]	-	33 [1/3]
		2d Bde	-	-	0 [0/5]	-	-	0 [0/5]
		Division	25 [1/4]	-	0 [0/5]	100 [1/1]	-	20 [2/10]

CATEGORY IC: INFORMATION CONGRUENCE

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
IC.2.0	Inter-CP Agreement on Battlefield Picture (%) [# of SA information pairs in agreement/total # of possible pairs]							
	CP:	DMAIN	0 [0/1]	0 [0/1]	50 [2/4]	-	-	33 [2/6]
		DTAC	-	-	60 [3/5]	-	67 [2/3]	63 [5/8]
		DREAR	-	-	100 [1/1]	-	67 [2/3]	75 [3/4]
		2d Bde	0 [0/1]	0 [0/1]	-	-	-	0 [0/2]
		Division	0 [0/2]	0[0/2]	60 [6/10]	-	67 [4/6]	50 [10/20]
iC.2.1	Inter-CP Agreement on Friendly Battlefield Picture (%) [# of friendly SA information pairs in agreement/total # of possible pairs]							
	CP:	DMAIN	0 [0/1]	0 [0/1]	33 [1/3]	-	-	20 [1/5]
		DTAC	-	-	50 [2/4]	-	-	50 [2/4]
		DREAR	-	-	100 [1/1]	-	-	100 [1/1]
		2d Bde	0 [0/1]	0 [0/1]	-	-	-	0 [0/2]
		Division	0 [0/2]	0[0/2]	50 [4/8]	-	-	33 [4/12]

CATEGORY IC: INFORMATION CONGRUENCE

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
IC.2.2	Inter-CP Agreement on Enemy Battlefield Picture (%) [# of enemy SA information pairs in agreement/total # of possible pairs]							
	CP:	DMAIN	-	-	100 [1/1]	-	-	100 [1/1]
		DTAC	-	-	100 [1/1]	-	67 [2/3]	75 [3/4]
		DREAR	-	-	-	-	67 [2/3]	67 [2/3]
		Division	-	-	100 [2/2]	-	67 [4/6]	75 [6/8]

IC.3.0	Intra-CP Coordination Request Time (median in hours) [time action initiated minus time need is perceived]							
	CP:	DMAIN	___{10|10}	.3 {11|9}	___ {2|2}	___ {6|6}	___ {5|5}	.3 {34|32}
		DTAC	-	__{1|1}	-	___ {10|2}	-	___ {11|3}
		DREAR	-	.1 {3|1}	1 {1|1}	.3 {3|2}	___ {4|4}	.3 {1|8}
		2d Bde	1{6|5}	.4 {4|}	.4 {2\\0}	1.5 {1|0}	.4 {2|0}	.4 {15|8}
		Division	1{16 |15}	.2 {19|14}	.4 {5|3}	.9 {20|10}	.4 {1|9}	.4 {71|51}

CATEGORY IC: INFORMATION CONGRUENCE

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
IC.3.1	Intra-CP Coordination Cycle Time (median in hours) [time of resolution minus time need is perceived]							
	CP:	DMAIN	-	.1 {7|3}	.3 {1|0}	.4 {6|3}	.3 {5|0}	.3 {19|6}
		DTAC	-	.3 {2|0}	.5 {1|0}	___ {8|8}	-	.3 {11|8}
		DREAR	-	.9 {3|0}	-	.4 {3|0}	.5 {3|1}	.5 {9|1}
		3d Bde	___ {1|1}	.4 {4|3}	.5 {2|0}	2 {1|0}	.4 {2|0}	.5 {10|4}
		Division	___ {1|1}	.3 {16|6}	.5 {4|0}	.4 {18|11}	.3 {10|1}	.4 {49|19}

IC.3.2	Intra-CP Coordination Frequency [# of circumstances explicitly recognized]							
	CP:	DMAIN	10	22	13	18	11	74
		DTAC	-	4	6	14	1	25
		DREAR	-	3	2	3	4	12
		2d Bde	6	4	2	1	2	15
		Division	16	33	23	36	18	126

CATEGORY IC: INFORMATION CONGRUENCE

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
IC.3.3	Intra-CP Coordination Initiation (%) [# of coordinations initiated/ # of circumstances explicitly recognized]							
	CP:	DMAIN	100 [10/10]	100 [23/23]	100 [13/13]	100 [18/18]	100 [11/11]	100 [75/75]
		DTAC	-	100 [4/4]	100 [6/6]	100 [14/14]	100 [1/1]	100 [25/25]
		DREAR	-	100 [3/3]	100 [2/2]	100 [3/3]	100 [4/4]	100 [12/12]
		2d Bde	100 [6/6]	100 [4/4]	100 [2/2]	100 [1/1]	100 [2/2]	100 [15/15]
		Division	100 [16/16]	100 [34/34]	100 [23/23]	100 [36/36]	100 [18/18]	100 [127/127]
IC.3.4	Intra-CP Coordination Completion (%) [# of coordinations completed/# of coordinations initiated]							
	CP:	DMAIN	100 [10/10]	100 [22/22]	100 [13/13]	100 [18/18]	100 [11/11]	100 [74/74]
		DTAC	-	100 [4/4]	100 [6/6]	100 [14/14]	100 [1/1]	100 [25/25]
		DREAR	-	100 [3/3]	100 [2/2]	100 [3/3]	100 [4/4]	100 [12/12]
		2d Bde	100 [6/6]	100 [4/4]	100 [2/2]	100 [1/1]	100 [2/2]	100 [15/15]
		Division	100 [16/16]	100 [33/33]	100 [23/23]	100 [36/36]	100 [18/18]	100 [126/126]

CATEGORY IC: INFORMATION CONGRUENCE

MEASURES			DAY				
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
IC.3.x	Intra-CP Coordination Success (%) [# of coordinations completed/# of required coordinations recognized]						
	CP: DMAIN	100 [10/10]	100 [22/22]	100 [13/13]	100 [18/18]	100 [11/11]	100 [74/74]
	DTAC	-	100 [4/4]	100 [6/6]	100 [14/14]	100 [1/1]	100 [25/25]
	DREAR	-	100 [3/3]	100 [2/2]	100 [3/3]	100 [4/4]	100 [12/12]
	2d Bde	100 [6/6]	100 [4/4]	100 [2/2]	100 [1/1]	100 [2/2]	100 [15/15]
	Division	100 [16/16]	100 [33/33]	100 [23/23]	100 [36/36]	100 [18/18]	100 [126/126]
IC.4.0	Inter-CP Coordination Request Time (median in hours) [time action is initiated minus time need is perceived]						
	CP: DMAIN	.8 {3|2}	.8 {8|6}	.3 {3|2}	___ {3|3}	2.3 {4|3}	.8 {21|!6}
	DTAC	.3 {6|5}	.3 {18|17}	.2 {9|7}	___ {10|10}	___ {1|1}	.3 {44|40}
	DREAR	-	___ {1|1}	.2 {3|0}	___ {6|6}	.2 {2|1}	.2 {12|8}
	2d Bde	.3 {3|2}	___ {1|1}	.3 {6|5}	.4 {4|3}	.2 {8|7}	.3 {22|18}
	Division	.3 {12|9}	.3 {28|25}	.2 {21|14}	.4 {23|22}	.2 {15|12}	.2 {99|82}

CATEGORY IC: INFORMATION CONGRUENCE

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
IC.4.1	Inter-CP Coordination Cycle Time (median in hours) [time of resolution minus time need is perceived]							
	CP:	DMAIN	___ {1|1}	.3 {3|1}	.4 {3|2}	.3 {3|1}	3.0 {5|3}	.4 {15|8}
		DTAC	.3 {6|5}	.8 {26|21}	.4 {18|14}	___ {9|9}	.2 {2|0}	.3 {61|49}
		DREAR	-	-	1 {3|1}	.6 {7|2}	5.1 {2|1}	1 {12|4}
		2d Bde	.3 {4|2}	___ {1|1}	.6 {6|5}	.6 {4|2}	.4 {5|0}	.5 {20|10}
		Division	.3 {11|8}	.3 {30|23}	.6 {30|22}	.6 {23|14}	.6 {14|4}	.4 {108|71}
IC.4.2	Inter-CP Coordination Frequency [# of explicitly recognized circumstances]							
	CP:	DMAIN	4	8	4	5	5	26
		DTAC	6	33	25	13	16	93
		DREAR	-	1	5	8	-	14
		2d Bde	5	1	8	5	8	27
		Division	15	43	42	31	29	160

CATEGORY IC: INFORMATION CONGRUENCE

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
IC.4.3	Inter-CP Coordination Initiation (%) [# of coordination attempts/ # of circumstances explicitly recognized]							
	CP:	DMAIN	100 [4/4]	100 [8/8]	100 [4/4]	100 [5/5]	100 [5/5]	100 [26/26]
		DTAC	100 [6/6]	100 [33/33]	100 [25/25]	100 [13/13]	100 [16/16]	100 [93/93]
		DREAR	-	100 [1/1]	100 [5/5]	88 [7/8]	-	93 [13/14]
		2d Bde	100 [5/5]	100 [1/1]	100 [8/8]	100 [5/5]	100 [8/8]	100 [27/27]
		Division	100 [15/15]	100 [43/43]	100 [42/42]	97 [30/31]	100 [29/29]	99 [159/160]
IC.4.4	Inter-CP Coordination Completion (%) [# of coordinations completed/ # of coordinations initiated]							
	CP:	DMAIN	75 [3/4]	100 [8/8]	100 [4/4]	100 [5/5]	100 [5/5]	96 [25/26]
		DTAC	100 [6/6]	100 [33/33]	100 [25/25]	100 [13/13]	100 [16/16]	100 [93/93]
		DREAR	-	100 [1/1]	100 [5/5]	100 [7/7]	100 [2/2]	100 [15/15]
		2d Bde	100 [5/5]	100 [1/1]	100 [7/7]	80 [4/5]	63 [5/8]	85 [22/26]
		Division	93 [14/15]	100 [43/43]	100 [41/41]	97 [29/30]	90 [28/31]	97 [155/160]

CATEGORY IC: INFORMATION CONGRUENCE

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
IC.4.5	Inter-CP Coordination Success (%) [# of coordinations completed/ # of required coordinations recognized]							
	CP:	DMAIN	75 [3/4]	100 [8/8]	100 [4/4]	100 [5/5]	100 [5/5]	96 [25/26]
		DTAC	100 [6/6]	100 [33/33]	100 [25/25]	100 [13/13]	100 [16/16]	100 [93/93]
		DREAR	-	100 [1/1]	100 [5/5]	100 [8/8]	-	100 [14/14]
		2d Bde	100 [5/5]	100 [1/1]	88 [7/8]	80 [4/5]	88 [7/8]	89 [24/27]
		Division	93 [14/15]	100 [43/43]	98 [41/42]	97 [30/31]	97 [28/29]	98 [156/160]
IC.5.0	Inter-CP Consistency of Directives (%) [# of non-conflicting directives issued/total # of directives issued]		-	-	-	-	-	-
IC.6.0	Coordination Impact on Plans (%) [# of changes not due to coordination/total # of changes in the plan]		-	-	-	-	-	-

CATEGORY PC: PREDICT COURSES OF ACTION (COA)

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
PC.1.0	Number of Participants COAs (median) [# of staff members]							
		CP: DMAIN	-	3.0	3.0	18.0	10.0	5.0
		DTAC	5.0	-	-	-	-	5.0
		DREAR	-	-	-	-	-	-
		2d Bde	8.0	-	5.5	1.0	4.0	4.0
		Division	5.5	3.0	4.0	9.5	7.0	5.0
PC.2.0	Variety of Participants COAs (median) [# of staff members]							
		CP: DMAIN	-	2.0	2.0	12.0	5.0	3.5
		DTAC	2.0	-	-	-	-	2.0
		2d Bde	7.0	-	8.0	1.0	4.0	5.5
		Division	2.5	2.0	5.0	6.5	4.5	3.0
PC.3.0	Alternative COAs (median) [# of COAs considered]							
		CP: DMAIN	-	1.0	2.0	2.0	2.0	2.0
		DTAC	1.0	-	-	-	-	1.0
		2d Bde	1.0	-	2.0	1.0	2.0	2.0
		Division	1.0	1.0	2.0	1.5	2.0	2.0

CATEGORY PC: PREDICT COURSES OF ACTION (COA)

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
PC.4.0	Completeness of COA Analysis (%) [# of complete COAs/# of COA analysis conducted]							
	CP:	DMAIN	-	80 [4/5]	100 [2/2]	0 [0/2]	100 [2/2]	73 [8/11]
		DTAC	25 [1/4]	-	-	-	-	25 [1/4]
		2d Bde	0 [0/1]	-	50 [2/4]	100 [1/1]	100 [2/2]	63 [5/8]
		Division	20 [1/5]	80 [4/5]	67 [4/6]	33 [1/3]	100 [4/4]	61 [14/23]
PC.4.1	Predictions of Enemy Reaction (%) [# of COA analysis including enemy reactions/# of COAs]							
	CP:	DMAIN	-	80 [4/5]	100 [2/2]	100 [2/2]	100 [2/2]	91 [10/11]
		DTAC	25 [1/4]	-	-	-	-	25 [1/4]
		2d Bde	0 [0/1]	-	50 [2/4]	100 [1/1]	100 [2/2]	63 [5/8]
		Division	20 [1/5]	80 [4/5]	67 [4/6]	100 [3/3]	100 [4/4]	70 [16/23]
PC.4.2	Likely Degree of Mission Accomplishment (%) [# of COA analyses including mission accomplishment/ # of COAs]							
	CP:	DMAIN	-	80 [4/5]	100 [2/2]	100 [2/2]	100 [2/2]	91 [10/11]
		DTAC	75 [3/4]	-	-	-	-	75 [3/4]
		2d Bde	100 [1/1]	-	100 [4/4]	100 [1/1]	100 [2/2]	100 [8/8]
		Division	80 [4/5]	80 [4/5]	100 [6/6]	100 [3/3]	100 [4/4]	91 [21/23]

CATEGORY PC: PREDICT COURSES OF ACTION (COA)

MEASURES			DAY				
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
PC.4.3	Residual Capacity of Friendly Units Involved (%) [# of COA analyses including friendly capacity/ # of COAs]							
	CP:	DMAIN	-	100 [5/5]	100 [2/2]	0 [0/2]	100 [2/2]	82 [9/11]
		DTAC	100 [4/4]	-	-	-	-	100 [4/4]
		2d Bde	100 [1/1]	-	75 [3/4]	100 [1/1]	100 [2/2]	88 [7/8]
		Division	100 [5/5]	100 [5/5]	83 [5/6]	33 [1/3]	100 [4/4]	87 [20/23]
PC.4.4	Residual Capacity of Enemy Units (%) [# of COA analyses including enemy capacity/ # of COAs]							
	CP:	DMAIN	-	100 [5/5]	50 [1/2]	0 [0/2]	100 [2/2]	73 [8/11]
		DTAC	50 [2/4]	-	-	-	-	50 [2/4]
		2d Bde	100 [1/1]	-	50 [2/4]	100 [1/1]	100 [2/2]	75 [6/8]
		Division	60 [3/5]	100 [5/5]	50 [3/6]	33 [1/3]	100 [4/4]	70 [16/23]

CATEGORY PC: PREDICT COURSES OF ACTION (COA)

MEASURES			DAY				
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
PC.5.0	Accuracy of COA Analysis (%) [# of correct and not incorrect analyses/total # of evaluated analyses]							
	CP:	DMAIN	-	100 [4/4]	-	50 [1/2]	0 [0/2]	63 [5/8]
		DTAC	75 [3/4]	-	-	-	-	75 [3/4]
		2d Bde	100 [1/1]	-	0 [0/2]	100 [1/1]	50 [1/2]	50 [3/6]
		Division	80 [4/5]	100 [4/4]	0 [0/2]	67 [2/3]	25 [1/4]	61 [11/18]
PC.5.1	Correct COA Analysis (%) [# of correct analyses/total # of evaluated analyses]							
	CP:	DMAIN	-	75 [3/4]	-	0 [0/2]	0 [0/2]	38 [3/8]
		DTAC	75 [3/4]	-	-	-	-	75 [3/4]
		2d Bde	0 [0/1]	-	0 [0/2]	100 [1/1]	50 [1/2]	33 [2/6]
		Division	60 [3/5]	75 [3/4]	0 [0/2]	33 [1/3]	25 [1/4]	44 [8/18]

CATEGORY PC: PREDICT COURSES OF ACTION (COA)

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
PC.5.2	Not Incorrect COA Analysis (%) [# of not incorrect analyses/ total # of evaluated analyses]							
	CP:	DMAIN	-	25 [1/4]	-	50 [1/2]	0 [0/2]	25 [2/8]
		DTAC	0 [0/4]	-	-	-	-	0 [0/4]
		2d Bde	100 [1/1]	-	0 [0/2]	0 [0/1]	0 [0/2]	17 [1/6]
		Division	20 [1/5]	25 [1/4]	0 [0/2]	33 [1/3]	0 [0/4]	17 [3/18]
PC.5.3	Incorrect COA Analysis (%) [# of incorrect analyses/ total # of evaluated analyses]							
	CP:	DMAIN	-	0 [0/4]	-	50 [1/2]	100 [2/2]	38 [3/8]
		DTAC	25 [1/4]	-	-	-	-	25 [1/4]
		2d Bde	0 [0/1]	-	100 [2/2]	0 [0/1]	50 [1/2]	50 [3/6]
		Division	20 [1/5]	0 [0/4]	100 [2/2]	33 [1/3]	75 [3/4]	39 [7/18]
PC.6.0	COA Analysis Time-Span (median in hours) [the end of the period that the COA analysis covers minus the time the analysis is complete]							
	CP:	DMAIN	-	36.0 {1|0}	24.0 {1|0}	24.0 {1|0}	-	24.0 {3|0}
		DTAC	1.9 {2|0}	-	-	-	-	1.9 {2|0}
		2d Bde	48.0 {1|0}	-	48.0 {1|0}	12.0 {1|0}	12.0 {1|0}	30.0 {4|0}
		Division	24.9 {3|0}	36.0 {1|0}	36.0 {2|0}	18.0 {2|0}	12.0 {1|0}	24.0 {9|0}

CATEGORY PD: PREPARATION OF DIRECTIVE MEASURE

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
PD.1.0	Number of Participants - Directives (median) [# of staff members]							
	CP:	DMAIN	-	7	-	-	-	7
		DTAC	-	3.5	-	-	-	3.5
		2d Bde	2	-	-	-	3	2.5
		Division	2	5	-	-	3	3
PD.2.0	Variety of Participants - Directives (median) [# of staff sections]							
	CP:	DMAIN	-	5	-	-	-	5
		DTAC	3.5	-	-	-	-	3.5
		2d Bde	1	-	-	-	2	1.5
		Division	2	5	-	-	2	3
PD.3.0	Directive Preparation Time (median in hours) [time work ceases on directive minus time of decision on COA]							
	CP:	DMAIN	-	4 (2|0)	-	7.6 (1|0)	-	4.9 (3|0)

CATEGORY PD: PREPARATION OF DIRECTIVE MEASURE

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
PD.4.0	Warning Order Time (median in hours) [time work ceases on warning order minus time of decision on COA]		-	-	-	-	-	-
PD.5.0	Directive Time-Span (median in hours) [time directive expected to be fully completed minus time execution of first elements begins]							
	CP:	DMAIN	-	20.0 {1|0}	30.0 {2|0}	30.0 {2|0}	-	20.0 {5|0}
PD.6.0	Directive Match With Commander's Intent (%) [# of consistent elements/ total # of elements]		-	-	-	-	-	-
PD.7.0	Clarity of Directives (%) [# not req clarification/ total # of directives]							
	CP:	DMAIN	-	100 [3/3]	100 [3/3]	75 [3/4]	100 [1/1]	91 [10/11]
		DTAC	-	100 [2/2]	-	-	-	100 [2/2]
		2d Bde	0 [0/1]	100 [1/1]	-	-	0 [0/1]	33 [1/3]
		Division	0 [0/1]	100 [6/6]	1090 [3/3]	75 [3/4]	50 [1/2]	81 [13/16]

CATEGORY PD: PREPARATION OF DIRECTIVE MEASURE

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
PD.8.0	Lead Time (hours) for Directive Planning (median) [directive implementation time minus directive receipt time]	-	-	-	-	-	-
PD.9.0	Warning Order Lead Time (median in hours) [directive implementation time - warning order receipt time]	-	-	-	-	-	-
PD.10.0	Directive Impact on Plans (%) [# of directive fully implemented at intended time/total # of directives]						
	CP: DMAIN	-	0 [0/5]	100 [1/1]	0 [0/1]	100 [1/1]	25 [2/8]
	DTAC	-	100 [1/1]	-	-	-	100 [1/1]
	2d Bde	0 [0/1]	-	-	-	-	0 [0/1]
	Division	0 [0/1]	17 [1/6]	100 [1/1]	0 [0/1]	100 [1/1]	30 [3/10]

CATEGORY O: OUTGOING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
O.1.1	Friendly Status Report (FSR) Sent [# of reports sent in a selected period of time]							
	CP:	DMAIN	-	2	-	-	-	2
		2d Bde	2	-	-	1	-	3
		Division	2	2	-	1	-	5
O.1.11	FSR Punctuality (%) [# of FSRs sent early or on time/total # of FSRs sent]							
	CP:	DMAIN	-	50 [1/2]	-	-	-	50 [1/2]
		2d Bde	100 [2/2]	-	-	-	-	100 [2/2]
		Division	100 [2/2]	50 [1/2]	-	-	-	75 [3/4]
O.1.12	Timing of Punctual Reports (median in hours) [time due minus time sent]							
	CP:	DMAIN	-	2.0 [1/0]	-	-	-	2.0 [1/0]
		2d Bde	2.5 [2/0]	-	-	-	.2	2.5 [2/0]
		Division	2.5 [2/0]	2.0 [1/0]	-	-	.2	1.8 [3/0]

CATEGORY O: OUTGOING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
O.1.13	FSR Lateness (%) [# of FSRs sent late/ total # of FSRs sent]							
	CP:	DMAIN	-	50 [1/2]	-	-	-	50 [1/2]
		2d Bde	-	-	-	100 [1/1]	-	100 [1/1]
		Division	-	50 [1/2]	-	100 [1/1]	-	67 [2/3]
O.1.14	Timing of Late Reports (median in hours) [time sent minus due time]							
	CP:	DMAIN	-	2.9 {1|0}	-	-	-	2.9 {1|0}
		2d Bde	-	-	-	2.3 {1|0}	-	2.3 {1|0}
		Division	-	2.9 {1|0}	-	2.3 {1|0}	-	2.6 {2|0}
O.1.15	FSR Transmission Time (median in hours) [time FSR received by addressee minus time FSR sent]							
	CP:	DMAIN	-	.03 {1|0}	-	-	-	.03 {1|0}
		2d Bde	__ {2|2}	-	-	-	-	__ {2|2}
		Division	__ {2|2}	.03 {1|0}	-	-	-	.03 {3|2}
O.1.2	Enemy Intelligence Summary (INTSUM) Sent [# of reports sent in a selected period of time]							
	CP:	DMAIN	-	4	2	2	1	9
		2d Bde	-	1	-	-	-	1
		Division	-	5	2	2	1	10

CATEGORY O: OUTGOING INFORMATION HANDLING

MEASURES			DAY				
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
O.1.21	INTSUM Punctuality (%) [# of INTSUMs sent early or on time/total # of INTSUMs sent]							
	CP:	DMAIN	-	50 [2/4]	50 [1/2]	0 [0/2]	0 [0/1]	33 [3/9]
		2d Bde	-	0 [0/1]	-	-	-	0 [0/1]
		Division	-	40 [2/5]	50 [1/2]	0 [0/2]	0 [0/1]	30 [3/10]
O.1.22	Timing of Punctual Reports (median in hours) [time due minus time sent]							
	CP:	DMAIN	-	3.0 {2|0}	1.0 {1|0})	-	-	1.1 {3|0}
O.1.23	INTSUM Lateness (%) [# of INTSUMs sent late/total # of INTSUMS sent]							
	CP:	DMAIN	-	50 [2/4]	50 [1/2]	100 [2/2]	100 [1/1]	33 [6/9]
		2d Bde	-	100 [1/1]	-	-	-	-
		Division	-	60 [3/5]	50 [1/2]	100 [2/2]	100 [1/1]	70 [7/10]
O.1.24	Timing of Late Reports (median in hours) [time sent *minus* time due]							
	CP:	DMAIN	-	12.3 {2|0}	11.3 {1|0}	5.9 {2|0}	2.5 {1|0}	11.2 (6|0}
		2d Bde	-	1.1 {1|0}	-	-	-	1.1 {1|0}
		Division	-	11.1 {3|0}	11.3 {1|0}	5.9 {2|0}	2.5 {1|0}	11.0 {7|0}

CATEGORY O: OUTGOING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
O.1.25	INTSUM Transmission Time (median in hours) [time INTSUM received by adressee minus time INTSUM sent]		-	-	-	-	-	
O.2.1	FSR Completeness (%) [# of complete FSRs/ total # of FSRs sent]							
	CP:	DMAIN	-	100 [2/2]	-	-	-	100 [2/2]
		2d Bde	100 [2/2]	-	-	100 [1/1]	-	100 [3/3]
		Division	100 [2/2]	100 [2/2]	-	100 [1/1]	-	100 [5/5]
O.2.11	FSR Unit Completeness (%) [# of FSRs identifying units/total # of FSRs sent]							
	CP:	DMAIN	-	100 [2/2]	-	-	-	100 [2/2]
		2d Bde	100 [2/2]	-	-	-	100 [1/1]	100 [3/3]
		Division	100 [2/2]	100 [2/2]	-	-	100 [1/1]	100 [5/5]
O.2.12	FSR Location Completeness (%) [# of FSRs identifying locations/total # of FSRs sent]							
	CP:	DMAIN	-	100 [2/2]	-	-	-	100 [2/2]
		2d Bde	100 [2/2]	-	-	100 [1/1]	-	100 [3/3]
		Division	100 [2/2]	100 [2/2]	-	100 [1/1]	-	100 [5/5]

CATEGORY O: OUTGOING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
O.2.13	FSR Capability Completeness (%) [# of FSRs identifying capability/total # of FSRs sent]							
	CP:	DMAIN	-	100 [2/2]	-	-	-	100 [2/2]
		2d Bde	100 [2/2]	-	-	100 [1/1]	-	100 [3/3]
		Division	100 [2/2]	100 [2/2]	-	100 [1/1]	-	100 [5/5]
O.2.14	FSR Activity Completeness(%) [# of FSRs identifying activity/total # of FSRs sent]							
	CP:	DMAIN	-	100 [2/2]	-	-	-	100 [2/2]
		2d Bde	100 [2/2]	-	-	100 [1/1]	-	100 [3/3]
		Division	100 [2/2]	100 [2/2]	-	100 [1/1]	-	100 [5/5]
O.2.2	INTSUM Completeness (%) [# of complete INTSUMs/ total # of INTSUMs sent]							
	CP:	DMAIN	-	50 [2/4]	100 [2/2]	100 [2/2]	100 [1/1]	78 [7/9]
		2d Bde	-	0 [0/1]	-	-	-	0 [0/1]
		Division	-	40 [2/5]	100 [2/2]	100 [2/2]	100 [1/1]	70 [7/10]

CATEGORY O: OUTGOING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
O.2.21	INTSUM Unit Completeness (%) [# of INTSUMs identifying units/total # of INTSUMs sent]							
	CP:	DMAIN	-	50 [2/4]	100 [2/2]	100 [2/2]	100 [1/1]	78 [7/9]
		2d Bde	-	0 [0/1]	-	-	-	0 [0/1]
		Division	-	40 [2/5]	100 [2/2]	100 [2/2]	100 [1/1]	70 [7/10]
O.2.22	INTSUM Location Completeness (%) [# of INTSUMs identifying locations/total # of INTSUMs sent]							
	CP:	DMAIN	-	50 [2/4]	100 [2/2]	100 [2/2]	100 [1/1]	78 [7/9]
		2d Bde	-	100 [1/1]	-	-	-	100 [1/1]
		Division	-	60 [3/5]	100 [2/2]	100 [2/2]	100 [1/1]	80 [8/10]
O.2.23	INTSUM Capability Completeness (%) [# of INTSUMs identifying capability/total # of INTSUMs sent]							
	CP:	DMAIN	-	50 [2/4]	100 [2/2]	100 [2/2]	100 [1/1]	78 [7/9]
		2d Bde	-	0 [0/1]	-	-	-	0 [0/1]
		Division	-	40 [2/5]	100 [2/2]	100 [2/2]	100 [1/1]	70 [7/10]

CATEGORY O: OUTGOING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
O.2.24	INTSUM Activity Completeness (%) [# of INTSUMs identifying activity/total # of INTSUMs sent]							
	CP:	DMAIN	-	100 [4/4]	100 [2/2]	100 [2/2]	100 [1/1]	100 [9/9]
		2d Bde	-	100 [1/1]	-	-	-	100 [1/1]
		Division	-	100 [5/5]	100 [2/2]	100 [2/2]	100 [1/1]	100 [10/10]
O.3.1	FSR Non-Location Accuracy (%) [# of elements correctly reported/total # of elements]		-	-	-	-		-
O.3.11	FSR Identification Accuracy (%) [# of units correctly identified/total # of units]		-	-	-	-	-	-
O.3.12	FSR Capability Accuracy (%) [# of units whose capabilties are correctly reported/total # of units]		-	-	-	-	-	-
O.3.13	FSR Activity Accuracy (%) [# of units whose activities are correctly reported/total # of units]		-	-	-	-	-	-
O.3.14	FSR Location Accuracy (median error in km) [distance of (locaiton reported versus ground truth location)]		-	-	-	-	-	-

CATEGORY O: OUTGOING INFORMATION HANDLING

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
O.3.2	INTSUM Non-Location Accuracy (%) [# of elements correctly reported/total # of elements]	-	-	-	-	-	-
O.3.21	INTSUM Identification Accuracy (%) [# of units correctly identified/total # of units]	-	-	-	-	-	-
O.3.22	INTSUM Capability Accuracy (%) [# of units whose capabilities are correctly reported/total # of units]	-	-	-	-	-	-
O.3.23	INTSUM Activity Accuracy (%) [# of units whose activities are correctly reported/ total # of units]	-	-	-	-	-	-
O.3.24	INTSUM Location Accuracy (median error in km) [distance of (location reported versus ground truth locations)]	-	-	-	-	-	-
O.4.1	FSR Information Currency (median in hours) [time of the report when sent minus time of the oldest report element]	-	-	-	-	-	-
O.4.2	INTSUM Information Currency (median in hours) [time of the report when sent minus time of the oldest report element]	-	-	-	-	-	-
O.5.1	FSR Requests for Information (%) [# of elements queried/ # of elements missing or unclear]						
	CP: 2d Bde	100 [1/1]	-	-	-	-	100 [1/1]

CATEGORY O: OUTGOING INFORMATION HANDLING

MEASURES			DAY					
NUMBER	TITLE		1	2	3	4	5	AGGREGATE
O.5.11	Friendly Spot Reports Queried (%) [# of friendly spot reports queried/total # of friendly spot reports with missing or unclear information]		-	-	-	-	-	-
O.5.2	INTSUM Requests for Information (%) [# of elements queried/# of elements missing or unclear]		-	-	-	-	-	-
O.5.21	Enemy Spot Reports Queried (%) [# of enemy spot reports queried/total # of enemy spot reports with missing or unclear information]		-	-	-	-	-	-
O.6.1	FSR Satisfaction (%) [# of FSRs requiring no follow-up/total # of FSRs sent]							
	CP:	DMAIN	-	100 [2/2]	-	-	-	100 [2/2]
		2d Bde	50 [1/2]	-	-	100 [1/1]	-	67 [2/3]
		Division	50 [1/2]	100 [2/2]	-	100 [1/1]	-	80 [4/5]
0.6.2	INTSUM Satisfaction (%) [# of INTSUMs requiring no follow-up/total # of INTSUMs sent]							
	CP:	DMAIN	-	100 [4/4]	100 [2/2]	100 [2/2]	100 [1/1]	100 [9/9]
		2d Bde	-	100 [1/1]	-	-	-	100 [1/1]
		Division	-	100 [5/5]	100 [2/2]	100 [2/2]	100 [1/1]	100 [10/10]

CATEGORY O: OUTGOING INFORMATION HANDLING

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
O.7.11	Friendly Spot Report Currency (median in hours) [time of original stimulus minus time report sent]						
	CP: 2d Bde	-	-	0.1 {1|0}	-	0.1 {1|0}	0.1 {2|0}
O.7.12	Friendly Spot Report Transmission Time [time report received by addressee minus time report sent]	-	-	-	-	-	-
O.7.13	Friendly Spot Report Evaluation Time (median in hours) [time evaluated minus time received]	-	-	-	-	-	-
O.7.14	Friendly Spot Report Speed (median in hours) [time transmitted minus time evaluated]	-	-	-	-	-	-
O.7.21	Enemy Spot Report Currency (median in hours) [time transmitted minus time evaluated]	-	-	-	-	-	-
O.7.22	Enemy Spot Report Transmission Time (median in hours) [time report received by addressee minus time report sent]	-	-	-	-	-	-

CATEGORY O: OUTGOING INFORMATION HANDLING

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
O.7.23	Enemy Spot Report Evaluation Time (median in hours) [time evaluated minus time received]	-	-	-	-	-	-
O.7.24	Enemy Spot Report Speed (median in hours) [time transmitted minus time evaluated]	-	-	-	-	-	-
O.8.1	Friendly Spot Report Non-Location Accuracy (%) [# of elements correctly reported/total # of elements]	-	-	-	-	-	-
O.8.11	Friendly Spot Report Identification Accuracy (%) [# of units correctly identified/total # of units]	-	-	-	-	-	-
O.8.12	Friendly Spot Report Capability Accuracy (%) [# of units whose capabilities are correctly identified/ total # of units]	-	-	-	-	-	-
O.8.13	Friendly Spot Report Combat Activities Accuracy (%) [# of units whose activities are correctly reported/ total # of units]	-	-	-	-	-	-
O.8.14	Friendly Spot Report Location Accuracy (median error in km) [distance of (location reported versus ground truth location)]	-	-	-	-	-	-
O.8.2	Enemy Spot Report Non-Location Accuracy (%) [# of elements correctly reported/total # of elements]	-	-	-	-	-	-

CATEGORY O: OUTGOING INFORMATION HANDLING

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
O.8.21	Enemy Spot Report Identification Accuracy (%) [# of units correctly identified/total # of units]	-	-	-	-	-	-
O.8.22	Enemy Spot Report Capability Accuracy (%) [# of units whose capabilities are correctly identified/ total # of units]	-	-	-	-	-	-
O.8.23	Enemy Spot Report Combat Activities Accuracy (%) [# of units whose activities are correctly reported/ total # of units]	-	-	-	-	-	-
O.8.24	Enemy Spot Report Location Accuracy (median in error in km) [distance of (location reported versus ground truth location)]	-	-	-	-	-	-
O.9.0	Report Impact on Plan (%) [# of plan changes not due to report problems/ total # of plan changes]	-	-	-	-	-	-

CATEGORY DC: DECISION CONTEXT

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
DC.1.0	Decision Maker						
CP:	DMAIN						
	CDR	-	2	2	7	-	11
	AdC	-	-	-	-	1	1
	C of S/XO	-	-	-	2	-	2
	G3	-	1	1	1	-	3
	Other	1	1	-	-	-	2
	Unknown	-	1	-	-	-	1
	All	1	5	3	10	1	20
	DTAC						
	CDR	-	-	-	-	1	1
	AdC	-	-	-	-	2	2
	G3	-	-	-	-	1	1
	All	-	-	-	-	4	4

CATEGORY DC: DECISION CONTEXT

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
DC.1.0	Decision Maker						
CP:	2d Bde						
	CDR	-	4	5	3	1	13
	AdC		-	-	-	1	1
	C of S/XO		-	-	-	1	1
	G3		1	1	1	2	5
	Other		-	-	-	1	1
	All		5	6	4	6	21

CATEGORY DC: DECISION CONTEXT

MEASURES		DAY				
NUMBER	TITLE	1	2	3	4	5
DC.2.0	Affected Units					
CP:	DMAIN	DIVARTY	1 Bde	1 Bde	1 Bde	AVN Bde
		2 Bde	2 Bde	2 Bde	2 Bde	
			AVN Bde	AVN Bde	AVN Bde	
			DIVARTY	DIVARTY	DIVARTY	
			xxx Bde	xxx Bde	xxx Bde	
			ENG Bn	ENG Bn	ENG Bn	
			ADA	ADA	ADA	
			MI Bn	MI Bn	MI Bn	
			Sig Bn	Sig Bn	Sig Bn	
					Div CHEM	
	DTAC	-	-	-	-	2 Bde
						DIVARTY
						AVN Bde

CATEGORY DC: DECISION CONTEXT

MEASURES		DAY				
NUMBER	TITLE	1	2	3	4	5
DC.2.0	Affected Units					
CP:	DREAR	-	-	-	-	-
	2d Bde	-	2 Bde	2 Bde	2 Bde	2 Bde
			AVN Bde	INF Bn	1 Bde	xxx Bde
			INF Bn	INF Bn		AR Bn
			INF Bn	INF Bn		ADA
				FA		

CATEGORY DC: DECISION CONTEXT

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
DC.3.0	Decision Focus						
CP:	DMAIN						
	Mission	-	3	3	6	1	13
	Task Org	-	-	-	5	-	5
	Supports	1	1	1	2	-	5
	Schedules	1	1	-	2	-	4
	Boundaries	-	1	-	2	-	3
	Other	-	-	-	2	-	2
	All	2	6	4	19	1	32
	DTAC						
	Mission	-	-	-	-	2	2
	Task Org	-	-	-	-	1	1
	Supports	-	-	-	-	1	1
	Other	-	-	-	-	1	1
	All	-	-	-	-	5	5

CATEGORY DC: DECISION CONTEXT

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
DC.3.0	Decision Focus						
CP:	2d Bde						
	Mission	-	3	5	3	2	13
	Task Org		-	-	2	-	2
	Supports		-	4	3	-	7
	Schedules		2	4	1	1	8
	Boundaries		-	1	1	-	2
	Other		-	-	-	3	3
	Unknown		1	-	-	1	2
	All		6	14	10	7	37

CATEGORY DC: DECISION CONTEXT

MEASURES		DAY				
NUMBER	TITLE	1	2	3	4	5
DC.5.0	Time of Decision					
CP:	DMAIN	2035	0257 0808 0848 1610 2358	1510 2100 1616	0300 0340 0804 0804 0804 0804 1120 1735 1605 1821	1120
	DTAC	-	-	-	-	0712 0920 1255 1605
	2d Bde	-	1. 2145 2300 2202 2201	0220 0230 1528 2045 2115 2300	0630 2000 2110 2400	0010 0030 0530 0650 1314

1. One "time" not recorded.

CATEGORY DC: DECISION CONTEXT

MEASURES		DAY				
NUMBER	TITLE	1	2	3	4	5
DC.5.0	Time of Decision					
CP:	3d Bde	-	1920 1600 1032	0646	0946	0325 0613 0900

NOTES:

Day 1 - Two decision times unknown
Day 2 - Five decision times unknown
Day 3 - One decision time unknown

CATEGORY DC: DECISION CONTEXT

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
DC.6.0	Type of Operation						
CP:	DMAIN						
	Offensive	1	4	2	1	1	9
	Defensive	-	-	1	7	-	8
	Other	-	-	-	1	-	1
	Unknown	-	1	-	1	-	2
	All	1	5	3	10	1	20
	DTAC						
	Defensive	-	-	-	-	2	2
	Unknown	-	-	-	-	2	2
	All	-	-	-	-	4	4

CATEGORY DC: DECISION CONTEXT

MEASURES		DAY					
NUMBER	TITLE	1	2	3	4	5	AGGREGATE
DC.6.0	Type of Operation						
CP:	2d Bde						
	Offensive	-	1	3	-	-	4
	Defensive		-	2	1	3	6
	Other		4	1	2	1	8
	Unknown		-	-	1	2	3
	All		5	6	4	6	21

CATEGORY xE: EXERCISE CONTROL MEASURES

a. Description. Measures in this category do not address unit activities or outcome of the exercise but rather the conditions under which the exercise is conducted. Factors pertaining to the unit are type of unit, staffing level, recent combat/field experience, and familiarity with the exercise scenario. Factors pertaining to exercise conduct include realism in the exercise environment, duration and intensity of the exercise, degree to which higher and adjacent HQ are represented and the capabilities of the threat played against the unit. Weather and terrain impacts on the exercise are also noted. These factors contribute to the overall understanding of the outcome of the exercise.

b. Scores.

AE.1.0 EXERCISE ENVIRONMENT AUTHENTICITY. This was a command post exercise conducted in a field environment with the deployed e'ements of the division tactical operations centers (DMAIN, DREAR, DTAC) and brigade tactical operations center.

AE.2.0 EXERCISE PERIOD. The exercise was conducted over a 5-day period.

AE.2.1 Operational Phase of the Exercise. Phases of the tactical exercise "play" from STARTEX through battle phases to ENDEX.

STARTEX	Day 1 (2100)
Offensive	Day 2 (2100)
Defensive	Day 3 (1550)
Offensive	Day 3 (2030)
Defensive	Day 4 (1300)
ENDEX	Day 5 (2000)

AE.3.0 HIGHER HQ REPRESENTATION. Higher headquarters were represented by the corps commander and his primary staff.

AE.3.1. Adjacent HQ Representation. Adjacent headquarters participation was represented entirely by computer simulation.

UE.1.0 UNIT EXPERIENCE. The unit had not been deployed in a combat or crisis situation within the last 24 months.

UE.1.1 Unit Time in Field. The unit had spent 6-7 months in the field in the past 24 months.

UE.1.2 Unit Time Out of Action. The unit was last in action, in an FTX, in April 1991.

UE.2.0 UNIT ECHELON. The unit participating in the exercise was a division.

UE.3.0 UNIT TYPE. The division was a light infantry division.

UE.4.0 EXTENDED STAFF SIZE. Numerical size of the extended staff (staff that reports to the commander, assistant commanders, chief of staff and principal general and special staff members). Information collected was ambiguous and this measure cannot be addressed.

UE.4.1 Extended Staff to TO&E Ratio. Ratio of the extended staff to the TO&E staff positions. There were no data collected to address this measure.

UE.4.2 Extended Staff Time with Unit. The median length of time extended staff members had been with the unit was 14 months.

UE.4.3 Extended Staff Time In Position. The extended staff members had been in their current positions for a median of 10 months.

UE.5.0 IMMEDIATE STAFF SIZE. Information collected was ambiguous and this measure cannot be addressed.

UE.5.1 Immediate Staff to TO&E Ratio. There were no data collected to address this measure.

UE.5.2 Immediate Staff Time with Unit. Median length of time immediate staff members had been with the unit. Immediate staff members had been with the unit for a median period of 10 months.

UE.5.3 Immediate Staff Time in Position. The median length of time immediate staff members had been in their current positions was eight months.

UE.6.0 UNIT C2 AUTOMATION.. The unit had Apple computers tied in with an Air Force intelligence system (AC2SMAN) to assist in automating its C2 capabilities. The Mobile Subscriber Equipment (MSE) was the primary means of communication in the division.

EE.1.0 WEATHER IMPACT ON EXERCISE. No data was collected to determine if the weather had an impact on the exercise.

EE.2.0 TERRAIN IMPACT ON EXERCISE. The exercise scenario was conducted over mountainous and in urban terrain similar to that found in Korea. No data were collected on the impact the terrain had on the exercise.

EE.3.0 HABITABILITY. The unit operated and lived under field conditions.

EE.4.0 EXERCISE WORKLOAD. Data on number of hours of participation for principal participants were not collected to address this measure.

EE.4.1 Exercise Shifts. The normal length of a shift for principal participants for the exercise was 14 hours.

EE.4.2 Exercise Overtime. Percentage of principal participants who worked beyond the length of normal shifts. There were no data collected to evaluate this measure; however, principal participants generally worked longer than normal shifts.

EE.5.0 COMBAT INTENSITY Combat intensity during the exercise was high.

EE.6.0 EXERCISE UNCERTAINTY. Unit's familiarity with exercise scenario, terrain, opposing forces, and friendly forces. The unit was quite familiar with the elements "Exercise Scenario," "Exercise Terrain," and "Friendly Forces," because unit personnel had been involved in field exercises that involved essentially the same combat environment. The unit was somewhat familiar with the element "Opposing Forces" because it was provided with an order of battle book containing information on the OPFOR.

EE.7.0 PACE OF EXERCISE. Relative frequency of events that created new military situations.. There were no data collected to address this measure.

EE.8.0 THREAT ENVIRONMENT IN EXERCISE. Measure of enemy threat in which the unit operated during the exercise. The unit operated in a high threat environment, because the force ratio was less than 2 to 1 in the division's favor, the enemy had electronic warfare capability, and chemical weapons were used.

APPENDIX B
EXERCISE SUMMARY

Key events in the exercise are summarized below and presented graphically in Figure B-1.

Seventy-two hours before STARTEX, one of the two organic brigades and a separate infantry brigade (SIB) began infiltration.

The division continued infiltration through STARTEX (late in Day 1) with the other organic brigade in reserve.

Late in Day 2, a 45 minute artillery prep began Phase II of the division's attack. At 2100 hours the division began the attack with the forward organic (2d) and separate infantry brigades (SIB) and received heavy indirect fire. An hour after the attack started, the reserve (1st Bde) was airlifted to forward positions because of obstacles, destroyed brigades, and congestion on the approaching land routes.

On Day 3 at 1039 hours, the 1st Bde made contact with the enemy and at 1300 hours the 1st brigade assumed the division's main effort. At 1550 hours, the 1st brigade halted offensive operations and began to establish hasty defensive positions. The 2d Bde met stiff resistance and also went into a defensive posture. The SIB continued to attack but met increasing enemy resistance. The division was forced to assume a defensive posture that was induced by JESS with the injection into the scenario of additional enemy units by the Battle Command Training Program (BCTP) team.

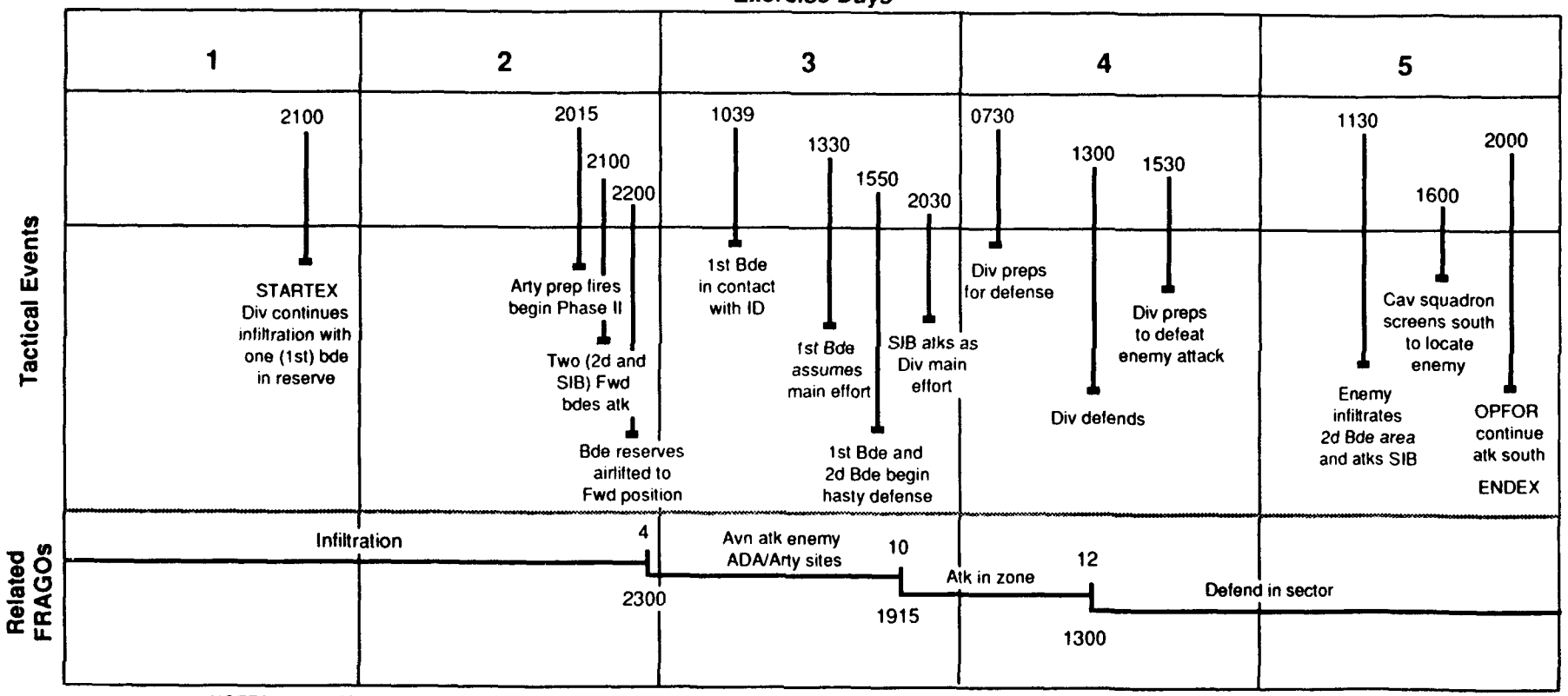
Throughout the night the enemy attacked all three brigades, and the division began to prepare for defense on the morning of Day 4. At 1300 hours, the division was in a defensive posture. At 1530 hours, the division began preparations to defeat an expected enemy attack. Throughout the evening divisional units continued receiving heavy artillery fire.

During the morning of Day 5, the division continued to emplace obstacles, improve defensive positions, and reconstitute units. By midday four enemy infantry battalions successfully infiltrated the 2d Bde's area and two enemy mechanized infantry battalions attacked the SIB. At 1600 hours the division cavalry squadron screened south to locate the enemy.

At ENDEX (2000 hours) the enemy continued the attack south with five mechanized and two tank brigades.

KEY EVENTS

Exercise Days



NOTES:
(1) 72 hrs prior to STARTEX elements of the division and subordinate brigades began infiltration to positions near their objectives
(2) First three division FRAGOs in effect at STARTEX
(3) Abbreviations: Arty - artillery; Atk - attack; Avn - aviation; Cav - cavalry; Div - division; Fwd - forward
(4) Acronyms: SIB - Separate Infantry Brigade; ID - infantry division; OPFOR - opposing forces

Figure B-1

APPENDIX C

ACCES Scoring Sheets

CATEGORY G: GENERAL MEASURES

G.1.0 Plan Duration (Hours)

time the plan ends
minus
time the plan is implemented

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	0.8	11.7 4.5 3.2 3.1 2.0 3.2 (median)	27.3 4.8 3.8 4.8 (median)	-
DREAR	-	6.9	-	-	-

CATEGORY G: GENERAL MEASURES

G.1.1 Mission Duration (Hours)

time mission assignments change
minus
time mission assignments established

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	-	9.1 17.5 13.3 (median)	-	-

CATEGORY G: GENERAL MEASURES

G.1.2 Task Organization Duration (Hours)

time task organization changes
minus
time task organization established

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	11.9	2.0 3.2 16.2 3.2 (median)	4.2 3.8 4.0 (median)	-

CATEGORY G: GENERAL MEASURES

G.6.0 C2 Planning Cycle Time (Hours)

time task organization changes
minus
time task organization established

DOMAIN

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
-	9.6 3.7 6.7 (median)	8.4 3.8 6.1 (median)	4.1 7.9 3.9 4.1 (median)	7.4

CATEGORY G: GENERAL MEASURES

G.6.3 High Planning Stress Cycle Time (Hours) planning cycle time

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	9.6 3.7 6.7 (median)	8.4 3.8 6.1 (median)	4.1 7.9 3.9 4.1 (median)	7.4

CATEGORY I: INCOMING INFORMATION HANDLING

I.1.12 Timing of Punctual Reports (Hours)

time due
minus
time received

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	0.3 0.1 .2 (median)	.9	-	-
DTAC	-	-	.3	-	0.0 0.2 .2

CATEGORY I: INCOMING INFORMATION HANDLING

I.1.14 Timing of Late Reports (Hours)

time received minus time due

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	1.6	3.7 1.6 2.5 2.5 (median)	-	3.5 (median)	-
DTAC	-	3.8	-	-	1.0 2.5 1.8 (median)
DREAR	2.5	-	-	-	-

CATEGORY I: INCOMING INFORMATION HANDLING

I.1.22 Timing of Punctual Reports (Hours)

time due
minus
time received

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	12.7	13.1 14.2 15.1 14.2 (median)	-	12.2	-
DREAR	-	13.1 13.3 13.5 13.3 (median)	-	-	-

CATEGORY I: INCOMING INFORMATION HANDLING

I.1.24 Timing of Late Reports (Hours)

time received minus time due

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	12.7	15.1 14.2 13.1 14.2 (median)	-	12.2	-
DREAR	-	13.5 13.3 13.1 13.3 (median)	-	-	-

CATEGORY T: TRACKING THE SITUATION MEASURES

T.3.0 Time Span of Assessments (Hours)

end of period assessments covers
minus
the time the assessment is expressed

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	24.0 12.0 18.0 (median)	72.0 72.0 24.0 72.0 (median)	72.0 72.0 48.0 24.0 22.6 12.0 36.0 (median)	72.0 24.0 12.0 24.0 (median)	72.0 24.0 2.0 24.0 (median)
DTAC	36.0 2.4 1.6 1.5 1.0 .1 1.6 (median)	36.0 3.0 .8 3.0 (median)	36.0	17.6 15.0 10.3 5.9 12.5 (median)	24.0 3.0 13.5 (median)
DREAR	-	-	-	11.8	-
2d Bde	-	2.9 2.5 2.0 2.5 (median)	10.7	12.0 10.8 1.6 10.8 (median)	12.0

CATEGORY IC: INFORMATION CONGRUENCE

IC.3.0 Intra-CP Coordination Request Time (Hours)

time action initiated
minus
time need is perceived

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	10 x 0	9 x 0 .3 .3 .3 (median)	2 x 0	6 x 0	5 x 0
DTAC	-	1 x 0	-	2 x 0	-
DREAR	-	1 x 0 .1 .1 .1 .1 (median)	1.0	2 x 0 .3 .3	4 x 0
2d Bde	5 x 0 .1 .1	4 x 0 .4 .4	.3 .4 .4 (median)	1.5	.3 .5 .4 (median)

CATEGORY IC: INFORMATION CONGRUENCE

IC.3.1 Intra-CP Coordination Cycle Time (Hours)

time of resolution
minus
time need is perceived

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	3 x 0 .3 .9 .1 .1 .2 (median)	.3	3 x 0 2.0 .6 .4 .6 (median)	1.0 .3 .3 .2 .1 .3 (median)
DTAC	-	.2 .3 .3 (median)	.5	8 x 0	-
DREAR	-	1.8 .9 .1 .9 (median)	-	.6 .4 .3 .4 (median)	1 x 0 .9 .5 .5 (median)
2d Bde	1 x 0 _ {1|1}	.3 x 0 .4 .4	.5 .4 .5 (median)	.2	.3 .5 .4 (median)

CATEGORY IC: INFORMATION CONGRUENCE

IC.4.0 Iner-CP Coordination Request Time (Hours)

time action is initiated
minus
time need is perceived

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	2 x 0 .8 .8	6 x 0 1.3 .3 .8 (median)	2 x 0 .3 .3	3 x 0	3 x 0 2.3 2.3
DTAC	5 x 0 .3 .3	11 x 0 .3 .3	7 x 0 .2 .2 .2 (median)	10 x 0	1 x 0
DREAR	-	1 x 0	.1 .6 .2 .2 (median)	6 x 0	1 x 0 .2 .2
2d Bde	2 x 0 .3 .3	1 x 0	4 x 0 .3 .3	3 x 0 .4 .4	7 x 0 .2 .2

CATEGORY IC: INFORMATION CONGRUENCE

IC.4.1 Iner-CP Coordination Cycle Time (Hours)

time of resolution
minus
time need is perceived

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	1 x 0	1.3 .3 1 x 0 .8 (median)	2 x 0 .4 .4	.3 .2 1 x 0 .3 (median)	2.3 3.3 3 x 0 2.8 (median)
DTAC	5 x 0 .3 .3	.3 .3 .1 4.2 .8 21 x 0 .3 (median)	.5 .2 .1 .8 14 x 0 .4 (median)	9 x 0	.1 .2 .2 (median)
DREAR	-	-	1.3 .7 1.0 (median)	2 x 0 .2 1.9 .1 2.6 .6 .6 (median)	1 x 0 5.1 5.1
2d Bde	.3 .3 .3 (median)	1 X 0	5 X 0 .6 .6	1 x 0 .6 .6 .6 (median)	.1 1.8 .4 .2 .8 .4 (median)

CATEGORY PC: PREDICT COURSES OF ACTION

PC.1.0 Number of Participants - COAs

number of staff members

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	7.0 2.0 3.0 – 3.0 (median)	9 x 0 3.0 3.0	18.0	10.0
DTAC	5.0 6.0 5.0 5.0 (median)	-	-	-	-
2d Bde	8.0	-	7.0 4.0 5.5 (median)	1.0	4.0

CATEGORY PC: PREDICT COURSES OF ACTION

PC.2.0 Variety of Participants - COAs

number of staff sections

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	5.0 2.0 2.0 2.0 (median)	2.0	12.0	5.0
DTAC	3.0 2.0 2.0 2.0 (median)	-	-	-	-
2d Bde	7.0	-	8.0	1.0	4.0

CATEGORY PC: PREDICT COURSES OF ACTION

PC.3.0 Alternative COAs

number of COAs considered

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	1.0 1.0 2.0 1.0 1.0 (median)	2.0	2.0	2.0
DTAC	2.0 1.0 1.0 1.0 (median)	-	-	-	-
2d Bde	1.0	-	2.0 2.0 2.0 (median)	1.0	2.0

CATEGORY PC: PREDICT COURSES OF ACTION

PC.6.0 COA Analysis Time-span (Hours)

the end of the period that the COA analysis covers
minus
the time the analysis is complete

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	36.0	24.0	24.0	-
DTAC	1.9	-	-	-	-
2d Bde	48.0	-	48.0	12.0	12.0

CATEGORY PD: PREPARATION OF DIRECTIVE MEASURES

PD.1.0 Number of Participants - Directives number of staff members

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	7.0	-	-	-
DTAC	-	5.0 2.0 3.5 (median)	-	-	-
2d Bde	2.0	-	-	-	-

CATEGORY PD: PREPARATION OF DIRECTIVE MEASURES

PD.2.0 Variety of Participants - Directives

number of staff sections

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	5.0	-	-	-
DTAC	52 3.5 (median)	-	-	-	-
2d Bde	1.0	-	-	-	2.0

CATEGORY PD: PREPARATION OF DIRECTIVE MEASURES

PD.3.0 Directive Preparation Time (Hours)

time work ceases on the directive
minus
time of the decision

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	4.9 3.1 4 (median)	-	7.6	-

CATEGORY PD: PREPARATION OF DIRECTIVE MEASURES

PD.5.0 Directive Time-span (Hours)

time the directive is expected to be
fully completed
minus
time execution of the first element begins

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	20.0	48 12 30.0 (median)	12 48 30.0 (median)	-

CATEGORY O: OUTGOING INFORMATION HANDLING

O.1.12 Timing of Punctual Reports (Hours)

time due time
minus
time sent

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	2.0	-	-	-
2d Bde	1.8 1.1 2.5 (median)	-	-	-	-

CATEGORY O: OUTGOING INFORMATION HANDLING

O.1.14 Timing of Late Reports (Hours)

time sent minus time due

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	2.9	-	-	-
2d Bde	-	-	-	2.3	-

CATEGORY O: OUTGOING INFORMATION HANDLING

O.1.15 FSR Transmission Time (Hours)

time received by addressee
minus
time sent

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	.03	-	-	-
2d Bde	-	-	-	-	-

CATEGORY O: OUTGOING INFORMATION HANDLING

O.1.22 Timing of Punctual Reports

time due minus time sent

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	4.5 1.1 2.8 (median)	1.0	-	-

CATEGORY O: OUTGOING INFORMATION HANDLING

O.1.24 Timing of Late Reports (Hours)

time sent
minus
time due

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
DMAIN	-	11.0 13.5 12.3 {2|0}	11.3	.1 11.6 5.9 (median)	2.5
2d Bde	-	1.1	-	-	-