TECHNICAL REPORT 2004-0010

Joint Single Integrated Air Picture (SIAP) System Engineering Organization (JSSEO) Standard Event Test Report Template

DECEMBER 2004

Joint Single Integrated Air Picture System Engineering Organization (JSSEO)

1851 South Bell Street
Crystal Mall 3, Suite 1109
Arlington VA 22202

Report Documentation Page

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DECEMBER 2004

Joint Single Integrated Air Picture System Engineering Organization (JSSEO)

1851 South Bell St.
Crystal Mall 3, Suite 1109
Arlington, VA 22202

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STANDARD TEST REPORT TEMPLATE

Joint Single Integrated Air Picture (SIAP)
System Engineering Organization (JSSEO)
Event Name (e.g., JDEP Federation E-2C HWIL Pilot)
Test Report

Approved by:

Note: The Director, JSSEO, or a designated representative, will be the approval authority for all Test Reports. Additional approval signatories will be established as appropriate based on the scope, complexity, level of visibility, and participants in the test event.

_____ _____

JSSEO
Name of Primary Point of Contac

Date

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STANDARD TEST REPORT TEMPLATE

Joint Single Integrated Air Picture (SIAP)
System Engineering Organization (JSSEO)
Event Name (e.g., JDEP Federation E-2C HWIL Pilot)
Test Report

Reviewed By:

Normally the SIAP Analysis Team Executive Steering Group (SAT ESG) will review the Test Report in addition to a cognizant representative from each participating organization.

Review Agency (e.g., E-2C)
Name of Primary Point of Contact **Date**

Review Agency (e.g., E-2C)
Primary Point of Contact **Date**

Review Agency (e.g., SIAP Analysis Team ESG)
Name of Primary Point of Contact **Date**

SAT ESG Co-Chair (JSSEO)
Name of Co-Chair **Date**

SAT ESG Co-Chair (USJFCOM)
Name of Co-Chair **Date**

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EXECUTIVE SUMMARY

The executive summary is designed to present a quick synopsis of the report's contents. Limit the executive summary to one page, if possible. Discuss only the most important results and findings using the following outline:

EVENT OVERVIEW

Provide a summary of essential information regarding the testing/simulation event. Include high-level objectives, dates, location of the event, and how the information will be used.

BACKGROUND

Identify any background information relevant to the test and its objectives.

SUMMARY OF EFFORT

Provide a summary of the test, including the on-site and post-event analysis effort.

LESSONS LEARNED

Include key lessons learned form the event.

CONCLUSIONS AND RECOMMENDATIONS

List the conclusions reached and any recommendations.

TABLE OF CONTENTS

TABLE OF FIGURES

TABLE OF APPENDICES

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1 INTRODUCTION

The introduction should provide information that helps the reader understand why and under what conditions the test was conducted. Most of the information included in this section comes directly from the Test Readiness Report.

1.1 Purpose/Intent

State the purpose of the test. This section should indicate the importance of the subject to the reader and relate this report to previous and similar work.

1.2 Background

Reference should be made to previous related tests and analysis.

1.2.1 Location/Venue

Identify the location of the test. If the test was distributed, provide a figure showing the distributed location of the test participants and give an overall description of their geographic dispersal and the implications of their dispersal on the test outcome. See Figure 1 for a Joint Distributed Engineering Plant (JDEP) example.

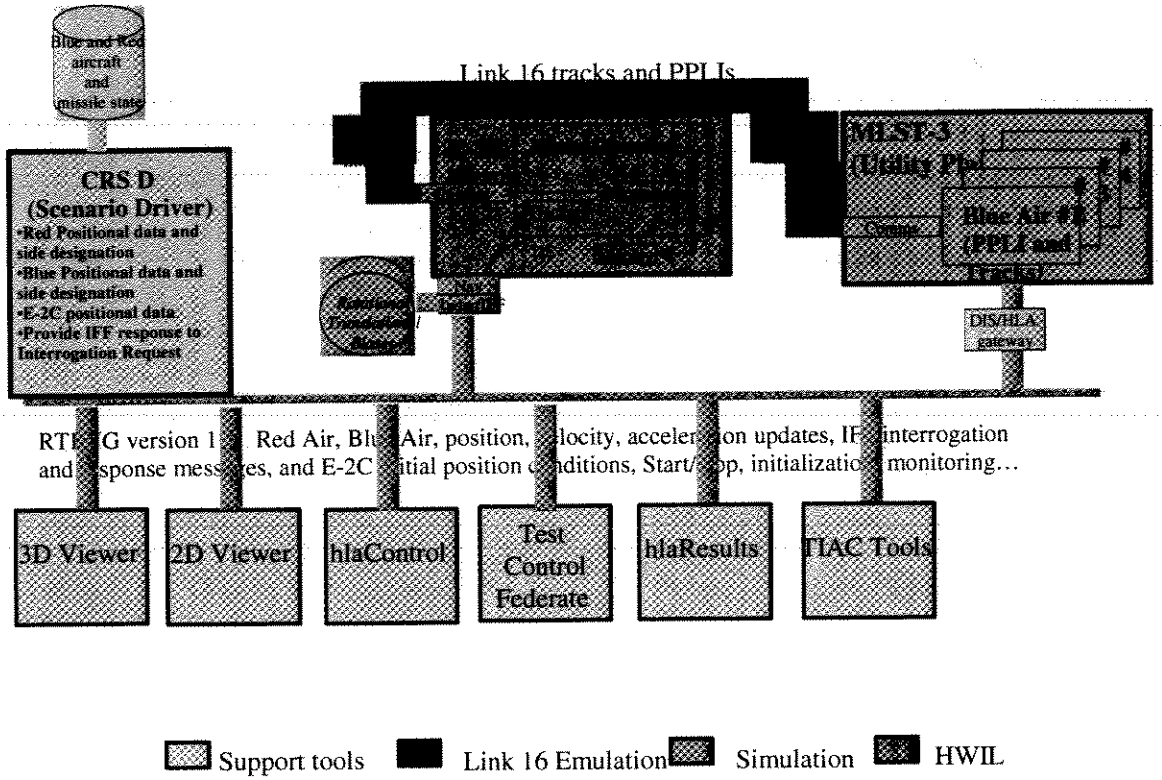

Figure 1: Sample JDEP Event Depiction

1.2.2 Environment

Describe the environment under which the test was conducted. Include weather and terrain factors encountered during the test, if applicable.

1.2.3 Air Defense Operations

Describe any air defense operations as conducted in the test.

1.2.4 Blue Forces (BLUFOR)

Describe any operations of the Blue Forces as conducted in the test.

1.2.5 Opposition Forces (OPFOR)

Describe any operations of the Opposition Forces as conducted in the test.

1.3 Overall Test Objectives

State the objectives of the test, which should be verbatim from the Test Readiness Report. If any objectives were not accomplished, identify them and explain why they were not accomplished. After you have stated which objectives were not accomplished and the reasons, then these objectives need not be mentioned again.

1.4 Assessment Constraints and Limitations

Include items that were not known or anticipated at the time of test planning, such as not being provided with anticipated equipment or computer programs, or changes in overall program schedule or scope.

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2 ASSESSMENT RESULTS AND ANALYSIS

This section is the core of the technical report. Include sufficient detail to clarify what was done and what was learned; be thorough, yet concise. Avoid excessive use of acronyms. If a new technique, procedure, or data gathering concept was developed, mention it here, but describe it thoroughly in an appendix. All conclusions and recommendations will depend upon this section for substantiation. Summary figures and tables that support major conclusions are appropriate in this section.

2.1 General

All achieved objectives contained in Section 1 should be covered. Specify the criteria against which the data supporting an objective were evaluated.

2.2 Analysis Objectives

Enumerate and list a title for each objective.

2.2.1 Objectives Description

Include a brief statement of each test objective.

2.3 Analysis Products

List the specific products expected to come out of the test analysis.

2.4 On-site Activity

Include a description of the methods employed to accomplish each objective while on site during the test. The length of this presentation will vary, depending on the objectives to be accomplished.

2.4.1 On-Site Objectives

Identify the objectives of the on-site analysis (e.g., root-cause analysis, events of interest, and Test Observation Report (TOR) capture and adjudication).

2.4.2 Organizational Analysis Support

Identify the roles and responsibilities of the organizations who participated in the test. List each organization separately, and indicate the contribution provided to the test (e.g., data collect, data reduction, data analysis).

2.4.3 Approach/Methodology

Describe the on-site analysis approach/methodology conducted during the test.

2.4.4 Data Collection

This section contains a description of tools used to collect data for analysis for each system involved. The tools should be described in sufficient detail to enable understanding of test procedures used and results obtained.

2.4.5 Test Procedures

Describe the test procedures for conducting the on-site analysis. Describe who did what during the on-site activity.

2.4.6 Test Observation Report (TOR) Process

Describe the process by which test observations were captured in TORs. Discuss the on-site adjudication of the TORs. Include whether an on-site version of the Lessons Learned Knowledge Base (LLKB) was used and to what extent.

2.4.7 Data Availability Matrix

Provide a data availability matrix for each participating system for each day of the event. Describe the data source, a brief description of the data (e.g., E-2C track file), and availability of the data for each day. For times where data was not available, provide a concise explanation.

2.4.8 Results

Summarize the findings and results of the on-site analysis. Identify any limitations or other issues that occurred during the on-site analysis process.

2.5 Post-Event Analysis

This section discusses the post-event analysis effort. It discusses the methodology, how truth data is developed, SIAP attribute calculations, Test Observation Reports (TORS) and their dissemination, events of interest, and critical experiments.

2.5.1 Post-Event Objectives

Identify the objectives of the post-event analysis. Include any dependence of the post-event analysis on the findings of the on-site analysis.

2.5.2 Approach/Methodology

Describe the approach/methodology of the post-event analysis.

2.5.3 TSPI Discussion

Discuss how the truth data was reduced and used in the post-event analysis.

2.5.4 Track Matching Process

Describe the track-matching process that was used for the post-event analysis. Indicate whether the Automated Reconstruction and Correlation Tool for Interoperability Characterization (ARCTIC) will be used (and include the version number of that computer program) and whether manual efforts will be conducted and to what extent.

2.5.5 PET Description and Processing

Indicate the version of Performance Evaluation Tool (PET) used for analysis and indicate whether the PET format provided in the test readiness report for the event was used or if a modified version was used. If a new format was used, indicate where differences lie, or provide a new table in an appendix.

2.5.6 SIAP Attributes

In this section, provide the results of the SIAP attributes calculations. Provide discussion and any root-cause analysis available of those results that do not meet objective and threshold values.

2.5.7 Prioritized TORs and Events of Interest (EOIs)

Each system involved in the test should provide a prioritized list of issues captured in TORs that were addressed post-event. Identify the events of interest analyzed post-event.

2.6 Critical Experiments

For each critical experiment, use a subsection to provide a brief overview of the experiment conducted for this test. Refer to the Test Readiness Report if necessary. Discuss the success or failure of meeting the critical experiment data collection requirements and other objectives. Provide the analysis and reporting plan for each critical experiment. Alternatively, each critical experiment description may be put into its own separate appendix to the final report.

2.7 Additional Analytical Issues

Use this section to identify any additional considerations about the analysis conducted post-event.

3 LESSONS LEARNED

This section should summarize the lessons learned from the event. Identify any problems encountered during the test and provide a brief discussion. Define and identify the solution to any issues that could benefit other comparable tests in the future.

3.1 Pre-Event Lessons Learned

Identify lessons learned from the event, including issues from a logistics and planning perspective. Include elements that worked well and those that need improvement.

3.2 On-Site Lessons Learned

Identify lessons learned from the on-site activities, including issues from an execution, and on-site analysis process perspective, including data collected, tools used, and methodologies exercised. Include elements that worked well and those that need improvement.

3.3 Post-Event Lessons Learned

Identify lessons learned from the post-event activities, including issues from the analysis process perspective, including reconstruction tools used, and methodologies exercised. Include elements that worked well and those that need improvement. Indicate how and by whom relevant TORs will be reviewed for candidacy into the SIAP Lessons Learned Knowledge Base.

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4 CONCLUSIONS AND RECOMMENDATIONS

This section should be able to stand alone. Include a summary paragraph briefly describing the key accomplishments and the extent to which the test objectives were met. Provide a summary discussion of the venue and its appropriateness for addressing the test objectives.

List interpretations of the results found in Section 2. These conclusions should be drawn from analysis and qualitative consensus.

Provide recommendations that identify what (if anything) should be done about the conclusions.

4.1 Unresolved Issues

Identify issues that have yet to be decided. Note any unresolved issues relating to the schedule, scope, or quality of the test effort.

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5 REFERENCES

References, when used, are always cited. Reports, books, papers, and other publications referred to in the report should be listed. Include any citations of work related to points brought out in the report or given as sources of additional information for the reader. References should include bibliographical information (i.e., complete title, author, publisher, date, etc.).

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APPENDIX A: ACRONYMS

Any abbreviation, symbol, and acronym used in your report must be defined in the report, when first used, and on this page. SIAP-related common acronyms are provided here.

A	Ambiguity
ABT	Air-Breathing Threat
AEW	Airborne Early Warning
AGC	Automatic Gain Control
ARCTIC	Automated Reconstruction and Correlation Tool for Interoperability Characterization
ASCII	American Standard Code For Information Exchange
C	Completeness (SIAP attribute)
CCD	Common Carrier Device
CD	Compact Disk
CEC	Cooperative Engagement Capability
CID CRD	Combat Identification Capstone Requirements Document
CINC	Commander in Chief
CNA	Center for Naval Analyses
COTS	Commercial off the Shelf
CRD	Capstone Requirements Document
CRS	Common Reference Scenario
CRSD	Common Reference Scenario Driver
DDM	Data Distribution Manager
DIS	Distributed Interactive Simulation
DISN	Defense Information Services Network
DM	Data Manager
DMAP	Data Management and Analysis Plan
DPCA	Displaced Phase Center Array
DPG	Defense Planning Guidance
DR	Data Recording/Data Reduction
DX	Data Extraction
DX/DR	Data Extraction/Data Recording
EOI	Event of Interest
ESG	Executive Steering Group
ESTEL	E-2C Systems Test and Evaluation Laboratory
FAR	Formal Analysis Report
FOM	Federation Object Model
FTP	File Transfer Protocol

GPS	Global Positioning System
GRU	Gridlock Reference Unit
GTE	Gateway Terminal Emulator
HLA	High-Level Architecture
HWIL	Hardware in the Loop
IADS	Integrated Air Defense System
IAW	In Accordance With
ICC	Information and Coordination Central
ICD	Interface Control Document
ID	Identification
IFF	Identification Friend or Foe
JCoCaC	Joint Council of Colonels and Captains
JDEP	Joint Distributed Engineering Plant
JIADS	Joint Integrated Air Defense System
JITC	Joint Interoperability Test Command
JNIC	Joint National Interoperability Center
JTAMDO	Joint Air and Missile Defense Organization
JTIDS	Joint Tactical Information Distribution System
KPP	Key Performance Parameter
MDA	Missile Defense Association
MIL-STD	Military Standard
MOE	Measure of Effectiveness
MOP	Measure of Performance
MS	Microsoft
NAVAIR	Navy Air
NSWC	Naval Surface Warfare Center
PC	Personal Computer
PET	Performance Evaluation Tool
PO	Program Office
POC	Point of Contact
PPLI	Precise Participant Location and Identification
PU	Participating Unit
R2	Reporting Responsibility
RTI	Runtime Infrastructure
SAT	Single Integrated Air Picture Analysis Team

SE	System Engineer
SIAP	Single Integrated Air Picture
SIF	Selective Identification Feature
Sim/Stim	Simulation/Stimulation
SIPRNET	Secret Internet Protocol Router Network
SME	Subject Matter Expert
SoS	System of Systems
SPC	Special Programs Center
SWIL	Software in the Loop
STU	Secure Telephone Unit
TACCAR	Time Averaged Clutter Coherent Airborne Radar
TADIL	Tactical Digital Information Link
TAMD	Theater Air and Missile Defense
TAMD CRD	Theater Air and Missile Defense Capstone Requirements Document
TD	Test Director or Tactical Driver
TDDS	TRAP Data Dissemination System
TF	Task Force
TIAC	Theater Air and Missile Defense Interoperability Assessment Capability
TIBS	Tactical Information Broadcast System
TIM	Terminal Input Message
TO	Test Objective
TOM	Terminal Output Message
TOR	Test Observation Report
TPWG	Test Plan Working Group
TQ	Track Quality
TRAP	Tactical Related Applications
TSIU	Tactical System Interface Unit
VV&A	Verification, Validations, and Accreditation
WAM	Warfare Assessment Model
WASP	Wrap-around Simulator Processor
WG	Working Group
WST	Weapons Systems Trainer
2D	2 Dimensional
3D	3 Dimensional

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APPENDIX B: FORMAL ANALYSIS REPORTS (FARs)

In this section, list any formal analysis reports. These reports should include detained discussion of the problem observed, the cause of the problem, and either a solution to the problem or a disposition for addressing the problem.

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APPENDIX C: INSTRUMENTATION

This appendix contains a more detailed description of the equipment used to gather data. The instrumentation is described in sufficient detail to enable understanding of test procedures used and results obtained.

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APPENDIX D: EXTENSIVE DATA

Use this section to provide data to substantiate the findings of the analysis. Use table format whenever possible to organize data in a consistent manner. This section should also include data formats used.

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APPENDIX E: MATHEMATICAL METHODS

Identify any structural analysis, statistical studies, or any analyses that were used to set up or perform the test or to reduce and analyze the results. Provide detailed results and calculations.

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APPENDIX F: POINTS OF CONTACT

Provide, in tabular format, a listing of contact information for personnel who contributed to the planning, execution, and analysis in this report.

JSSEO ROUTE SHEET AND OFFICE MEMO 064-04

(Do Not Detach from Official Correspondence; Write/Print Legibly Or Type)

ORIGINATOR (Signature)	CODE	ROOM	TEL.EXT.	Date
LCDR GHYZEL	JSSEO	1156	703-602-6441 x 258	21 SEP 2004

*INDICATE ROUTING 1. ACTION 2. COMMENT 3. CONCUR 4. FILE 5. FORWARD 6. INFO 7. PREPARE REPLY 8. RETENTION 9. RETURN 10. SIGNATURE

TO CODE	*purpose	RELEASED DATE	RELEASED INITIALS
Admin Supervisor Nina Huguenin	5		
Executive Asst Brad Gogats	NA		
Director Brig Gen Dinkins	2,5, 10	12/20	
SIAP SE Deputy Col Dutchyshyn	2,5, 10	12/20	
TECH DIR CAPT Wilson	2,5, 10	12/17/04	
COL Cook	NA		
Maj Biernesser	NA		
Eric Byrd	NA		
Maj Borowsky	NA		
Maj Conroy	NA		
Lt Col Cukr	NA		
Lt Col Davis	NA		
LtCol Elstad	NA		
LCDR Ghyzel	5	12/16	
Steve Karoly	2,5, 10		
LtCol Kowis	NA		
Walter Lawton	NA		
Cristine Lee	NA		
Maj McElligott	NA		
LtCol Pfiester	NA		
Lt Col Smither	NA		
CDR Stein	NA		
Maj Williams	NA		
Beth A. Smith	5	9/21/04	

Subj: STANDARD EVENT TEST REPORT TEMPLATE TECHNICAL REPORT - TR 2004-010

DEADLINE DATE (Fill-in when Required)	

ACTION: PLEASE REVIEW AND MAKE COMMENTS AS NEEDED

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QUESTIONS SHOULD BE DIRECTED TO NINA HUGUENIN 607-1651.

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1. Question ?
2. Conditions?