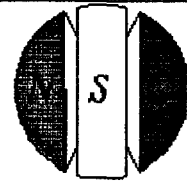


# REPORT DOCUMENTATION PAGE

Form Approved  
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

<b>1. AGENCY USE ONLY (Leave blank)</b>		<b>2. REPORT DATE</b> April 1994	<b>3. REPORT TYPE AND DATES COVERED</b> Final 1994	
<b>4. TITLE AND SUBTITLE</b> Confederation Verification, Validation, and Accreditation Master Plan (CVVAMP) - Technical Test Plan			<div style="border: 2px solid black; padding: 5px; font-size: 2em; font-weight: bold; text-align: center;">             DTIC SELECTED JAN 11 3 1995 B           </div>	
<b>6. AUTHOR(S)</b>				
<b>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</b> The MITRE Corporation 7525 Colshire Blvd McLean, VA 22102-3481			<b>8. PERFORMING ORGANIZATION REPORT NUMBER</b>	
<b>9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)</b> US Army Simulation, Training and Instrumentation Command (STRICOM) 12350 Research Parkway Orlando, FL 32826			<b>10. SPONSORING / MONITORING AGENCY REPORT NUMBER</b>	
<b>11. SUPPLEMENTARY NOTES</b>				
<b>12a. DISTRIBUTION / AVAILABILITY STATEMENT</b>  Unlimited			<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>DISTRIBUTION STATEMENT A</b> Approved for public release Distribution Unlimited           </div>	
<b>12b. DISTRIBUTION CODE</b>				
<b>13. ABSTRACT (Maximum 200 words)</b>  <p>The 1994 Confederation of Models is a set of DOD training simulations from each branch of the service which utilize the Aggregate Level Simulation Protocol (ALSP) to interact. The Confederation Verification, Validation, and Accreditation Master Plan (CVVAMP) consists of a several test plans and reports which include the: (a) Confederation of Models Verification, Validation, and Accreditation Master Plan (b) Technical Test Plan (c) Integrated Test Plan (d) Load Test Plan (e) Verification Test Plan.</p> <p>Related reports include the: (a) Accreditation Report for the Confederation of Models in General Headquarters 94 (b) Recommendations on the Use of the Seven Member Confederation of Models.</p> <p>The Technical Test Plan outlines test steps and test verification procedures for areas to include test setup, join/refresh/resign, time synchronization, filter operations, confederation save and restore, and ghosting objects.</p> <p style="text-align: right;"><b>DTIC QUALITY INSPECTED 8</b></p>				
<b>14. SUBJECT TERMS</b> Confederation of Models, ALSP, RESA, Military Training Models, AWSIM, MTWS, CBS, JECEWSI, TACSIM, CSSTSS, Simulation			<b>15. NUMBER OF PAGES</b> 12	
			<b>16. PRICE CODE</b>	
<b>17. SECURITY CLASSIFICATION OF REPORT</b> Unclassified	<b>18. SECURITY CLASSIFICATION OF THIS PAGE</b> Unclassified	<b>19. SECURITY CLASSIFICATION OF ABSTRACT</b> Unclassified	<b>20. LIMITATION OF ABSTRACT</b> Unlimited	



**Confederation 1994**  
**Technical Test Plan**  
*Enclosure 1 To*  
*Confederation of Models*  
*Verification, Validation*  
*and Accreditation*

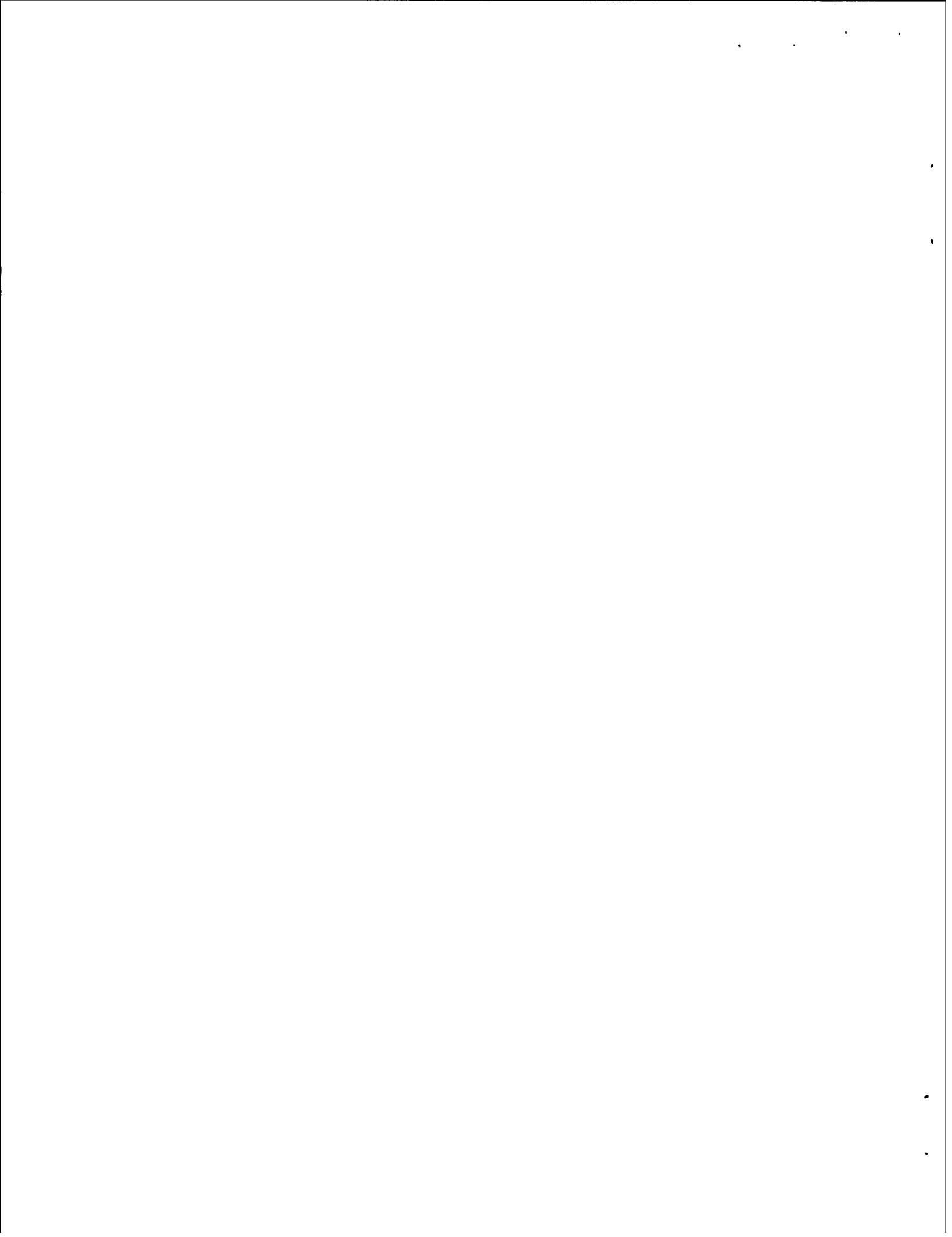
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*The National Simulation Center*

**CONQUERING  
FRONTIERS**



**TEST STEPS**

**TEST VERIFICATION**

**TEST RESULTS**

**0. Test Setup**

- a. Load and initialize test scenarios in all actors.  
Load ALSP software.

- a. All actors initialized and ready to start.
- b. ALSP Broadcast Emulator(s) and ALSP Common Modules initialized and ready to start.

**Record**

Site: \_\_\_\_\_  
Date: \_\_\_\_\_  
ALSP Confederation No. \_\_\_\_\_

**Actor 1**  
Version No. \_\_\_\_\_  
ALSP Actor Name \_\_\_\_\_  
ALSP Node Name \_\_\_\_\_

**Actor 2**  
Version No. \_\_\_\_\_  
ALSP Actor Name \_\_\_\_\_  
ALSP Node Name \_\_\_\_\_

**Actor 3**  
Version No. \_\_\_\_\_  
ALSP Actor Name \_\_\_\_\_  
ALSP Node Name \_\_\_\_\_

**Actor 4**  
Version No. \_\_\_\_\_  
ALSP Actor Name \_\_\_\_\_  
ALSP Node Name \_\_\_\_\_

**Actor 5**  
Version No. \_\_\_\_\_  
ALSP Actor Name \_\_\_\_\_  
ALSP Node Name \_\_\_\_\_

**Actor 6**  
Version No. \_\_\_\_\_  
ALSP Actor Name \_\_\_\_\_  
ALSP Node Name \_\_\_\_\_

**Actor 7**  
Version No. \_\_\_\_\_  
ALSP Actor Name \_\_\_\_\_  
ALSP Node Name \_\_\_\_\_

**TEST STEPS**

**TEST VERIFICATION**

**TEST RESULTS**

TEST STEPS	TEST VERIFICATION	TEST RESULTS
<p><b>1. Join/Refresh/Resign</b></p> <p>a. Start ABE</p> <p>b. Start each actor's ACM.</p> <p>c. Join each actor to the confederation.</p> <p>d. Set actor ratio to 1:1 (CSSTSS always runs as fast as it can).</p> <p>e. Display each actor's filter hierarchy.</p> <p>f. Create one or more objects in each actor which should be ghosted in the other actors. (Refer to the information below)</p> <p><b>Actor      Create Class</b></p> <p>CBS          HIMAD  ALLRAD  RADAR  SHORAD  COMBAT  HELICOPTER</p> <p>AWSIM      FIXEDWING  HELICOPTER  CRUISE_MISSILE  TBM</p> <p>RESA        FIXEDWING  HELICOPTER  CRUISE_MISSILE  TBM  SEA  BASE</p> <p>CSSTSS     SUPPORT</p>	<p>a. ABE is running.</p> <p>b. All ACMs in PREJOIN condition. Record each actor's join status.</p> <p>c. • Each actor's ACM verifies joining.  • Time not advancing.</p> <p>d. Time advances in all simulators at 1:1 rate.</p> <p>e. Verify that filter hierarchy is correct and that update set is union of create and interest set if not defined by actor.</p> <p>f. Actors ghost the appropriate objects created by other actors.</p> <p><b>Ghosted By</b></p> <p>AWSIM, CSSTSS, MTWS, JECEWSI  AWSIM, CSSTSS, MTWS, JECEWSI  AWSIM, CSSTSS, MTWS, JECEWSI  CSSTSS, MTWS, JECEWSI  CSSTSS, MTWS, JECEWSI  CSSTSS, (AWSIM, RESA, MTWS, TAT)</p> <p>RESA, CBS, MTWS, TAT  RESA, MTWS, TAT, (CSSTSS)  RESA  RESA</p> <p>AWSIM, CBS, MTWS, TAT  AWSIM, MTWS, TAT, (CSSTSS)  AWSIM  AWSIM  AWSIM, MTWS (Ships only)  AWSIM</p> <p>CBS</p>	<p><b>Actor      Reg.      Con.      Lookahead</b></p> <p>CBS        _____  _____</p> <p>AWSIM    _____  _____</p> <p>RESA      _____  _____</p> <p>JECEWSI   _____  _____</p> <p>MTWS     _____  _____</p> <p>CSSTSS   _____  _____</p> <p>TAT        _____  _____</p>

TEST STEPS	TEST VERIFICATION	TEST RESULTS
<p>f. For each actor:</p> <p>(1). Send REFRESH_REQUESTs from the ACM for all objects, by class.</p> <p>(2). RESIGN the actor at its control station and REMOVE (i.e. DELETE) objects from confederation.</p> <p>(3). JOIN the actor at its control station.</p>	<p>f.</p> <p>(1). • All required attributes should appear in the resulting UPDATE message from the actor.</p> <p>(2). • Confederation time continues to advance.          • ACMs display actor resignation.          • Ghosted objects are cleared from the resigned actor's data base.          • Ghosted objects, owned by the resigned actor, are cleared in the other actor's data bases.</p> <p>(3). • ACMs indicate actor has joined.</p>	

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DTIC TAB	<input type="checkbox"/>
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**TEST STEPS**

**TEST VERIFICATION**

**TEST RESULTS**

**2. Time Synchronization**

a. With all actors JOINED, set the game rate for all actors to be 1:1 (60 seconds per game cycle).

b. Create a mobile object in all actors that have that capability.

c. For each time-regulating actor individually :

(1). Set individual actor's game rate to 2:1. (30 seconds per game cycle).

(2). Set all other actor's game rates to 4:1. (15 seconds per game cycle).

(3). Place actor in PAUSE. Place actor in GO (Game Rate = 2:1).

(4). Set individual actor's game rate to 1:1 and turn that actor's ACM to TIME REGULATION OFF. Other actors remain at 4:1.

(5). Turn actor's ACM to TIME REGULATION ON. Set individual actor's game rate to 2:1.

a. • Time continues to advance in all actors at about real time.

• Game time in each actor advances at approximately the same time.

b. Update message for objects sent at appropriate intervals.

c.

(1). • All actors continue to advance in near real time.

(2). • All actors advance at 2:1.

• All actor game times remain equal.

(3). • Time ceases to advance for all actors when a single actor is in PAUSE.

• Time advances at about 2:1 when all actors are in GO.

(4). • Non-regulating actor lags behind confederation time.

• Since JECEWSI's time is still linked to AWSIM, it will not fall behind when running 1:1.

• Ghosted objects in regulating actors remain in positional correspondence.

• Ghosted objects in non-regulating actor fall behind parent positions.

(5). • Confederation time ceases to advance until all actor's game times are equal and then time advances at 2:1.

**All Actors**

CBS  
AWSIM  
RESA  
JECEWSI  
MTWS  
CSSTSS  
TAI

**Results**

**Regulating Actors**

CBS

**Results**

AWSIM

RESA

JECEWSI

MTWS

CSSTSS

TEST STEPS	TEST VERIFICATION	TEST RESULTS
<p>d. Set all actor's game rates to 1:1.</p> <p>e. For each time-constrained actor individually :</p> <ol style="list-style-type: none"> <li>(1). Set individual actor's game rate to fastest possible for scenario.</li> <li>(2). Reset individual actor's game rate to 1:1.</li> <li>(3). Set individual actor's game rate to 2:1 and turn that actor's ACM to TIME CONSTRAINED OFF.</li> <li>(4). Turn individual actor's ACM to TIME CONSTRAINED ON and set its game rate to 1:1.</li> <li>(5). Set all actor's game rates to 1:1.</li> </ol>	<p>d. Confederation game time advances in about real time.</p> <p>e.</p> <ol style="list-style-type: none"> <li>(1). • All actors continue to advance in near real time.</li> <li>(2). • All actors continue to advance in near real time.</li> <li>(3). • Unconstrained actor's time advances ahead of confederation. <ul style="list-style-type: none"> <li>• All moving objects of constrained actors remain in positional correspondence in unconstrained actor.</li> <li>• All moving objects of unconstrained actor fall behind position of object in ghosting actors.</li> </ul> </li> <li>(4). • Individual actor's time ceases to advance until confederation time catches up to it. <ul style="list-style-type: none"> <li>• Confederation game time advances in about real time.</li> </ul> </li> <li>(5). • Confederation game time advances in about real time.</li> </ol>	<p>Constrained Actors      Results</p> <p>CBS</p> <p>AWSIM</p> <p>RESA</p> <p>JECEWSI</p> <p>MTWS</p> <p>CSSTSS</p> <p>TAT</p> <p>NOTES:</p>



**TEST STEPS****TEST VERIFICATION****TEST RESULTS**

<p>f. Set all actor's game rates to 1:1.</p> <p>g. For each non-regulating actor individually :</p> <p>(1). Place actor in PAUSE. Place actor in GO at rate of 4:1 until it catches up to the rest of the confederation.</p> <p>h. For each unconstrained actor individually :</p> <p>(1). Set individual actor's game rate to 2:1.</p>
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<p>f. Confederation game time advances in about real time.</p> <p>g.</p> <p>(1). • All other actors continue to advance at 1:1.</p> <ul style="list-style-type: none"><li>• Individual actor's game time lags behind while paused.</li><li>• Ghosted objects in regulating actors remain in positional correspondence.</li><li>• Ghosted objects in non-regulating actor fall behind parent positions.</li></ul> <p>h.</p> <p>(1). • Unconstrained actor's time advances ahead of confederation.</p> <ul style="list-style-type: none"><li>• All moving objects of constrained actors remain in positional correspondence in unconstrained actor.</li><li>• All moving objects of unconstrained actor fall behind position of object in ghosting actors.</li></ul>
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<p><b>Non-regulating Actors</b></p> <p>TAI</p> <p><b>NOTES:</b></p> <p><b>Unconstrained Actors</b></p> <p>- None in 1994 Confederation -</p>	<p><b>Results</b></p>
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TEST STEPS	TEST VERIFICATION	TEST RESULTS
<p>4. Confederation Save / Restore</p> <p>a. With all actors joined and running, at least one object ghosted from each actor to another, and operating in time synchronization at 60-second game rates, schedule a confederation save for a few minutes in the future.</p> <p>b. Resign each actor.</p> <p>c. Restore each actor from the confederation save.</p> <p>d. Set game ratios to 1:1 and GO.</p>	<p>a. • Successful save taken by each actor at the scheduled time.  • Check each actor's ACM and ensure that:  (1) The Save Time and Label are the same for each ACM.  (2) A Start_Save message arrived for each actor.  (3) Time continues to advance following completion of save.</p> <p>b. Each actor resigns and ACMs are in an initialized state</p> <p>c. Confederation restored at save point</p> <p>d. Confederation advances at real time.</p>	
<p>5. Crash</p> <p>a. With all actors joined, at least one object ghosted from each actor to another, and operating in time synchronization at any rate, crash each actor individually.</p> <p>b. Stop the "CRASHED" actor's ACM and delete "CRASHED" actor's objects using the zombie killer.</p> <p>c. Restart "CRASHED" actor and REJOIN.</p> <p>d. Repeat steps a, b and c for each actor.</p>	<p>a. • Confederation time ceases to advance.  • Ghosted objects from crashed actor remain</p> <p>b. • Confederation game time advances.  • Objects owned by the "CRASHED" actor and ghosted in other actors disappear.</p> <p>c. • Confederation time ceases to advance until matched by the "CRASHED" actor's time.  • Objects created by the "CRASHED" actor reappear as ghosts in other actors.</p>	

TEST STEPS	TEST VERIFICATION	TEST RESULTS
<p>6. Ghosting Objects - AIR.FIXEDWING</p> <p>With all actors joined, and ACM filters set to allow all appropriate object classes:</p> <ol style="list-style-type: none"> <li>For each actor that owns fixed wing aircraft, create at least one BLUE, one RED, and one NEUTRAL flight of at least two aircraft that may be ghosted by another actor.</li> <li>Place 1 or more fixed wing objects at speed 0 in controlling actor. Place object at speed 100.</li> <li>Place 1 or more fixed wing objects on course 90.</li> <li>For 1 or more fixed wing objects change the mission to another allowed mission.</li> <li>Cause the status of one object to become "ORBIT".</li> <li>In controlling actor, split off an aircraft from a flight.</li> <li>Launch a flight with the same call sign from all possible actors.</li> <li>Land all AIR.FIXEDWING objects.</li> </ol>	<ol style="list-style-type: none"> <li>Objects appear on each actor's geographic display and data tables. Ensure the following: <ul style="list-style-type: none"> <li>Number of objects in groups correspond.</li> <li>Sides of objects correspond (BLUE/RED/NEUTRAL).</li> <li>Registration and update message are observed on wargame terminals.</li> <li>Call signs correspond</li> </ul> </li> <li>Ghost objects in each actor are at the same speed and course.</li> <li>Ghost objects in each actor are on the same course as that assigned by the owning actor.</li> <li>Ghost object's mission changes to correspond with mission assigned by owning actor.</li> <li>Ghost object continues to be observed.</li> <li> <ul style="list-style-type: none"> <li>New ghost flight is created.</li> <li>Size of old and new ghost flights correspond to size in controlling actor.</li> </ul> </li> <li>Ghost flights are assigned different call signs.</li> <li>Ghost flights are deleted from ghosting actors.</li> </ol>	<p>Results By Ghosting Actors:</p> <p><u>CBS:</u></p> <p><u>AWSIM:</u></p> <p><u>RESA:</u></p> <p><u>MTWS:</u></p> <p><u>TAT:</u></p>

**TEST STEPS**

**TEST VERIFICATION**

**TEST RESULTS**

**Ghosting Objects - Airlift Missions**

- a. For each actor that may fly helicopters on airlift missions, create at least one BLUE, one RED, and one NEUTRAL flight of at least two helicopters that may be ghosted by another actor.

- a. Objects appear on each actor's geographic display and data tables. Ensure the following:
- Number of objects in groups correspond
  - Sides of objects correspond (BLUE/RED/NEUTRAL).
  - Registration and update message are observed on wargame terminals.

**Results By Ghosting Actors:**

**CSSTSS:**

**AWSIM:**

**RESA:**

**MTWS:**

**Ghosting Objects - Ships**

- a. For each actor that owns objects of class SEA, create or relocate at least one BLUE, one RED, and one NEUTRAL object of each category to be ghosted in another actor.
- b. Place 1 or more sea objects at speed 0 in controlling actor. Place object at speed 10.
- c. Place 1 or more sea objects on course 90.
- d. To the controlling actor, sink at least one ship that is being ghosted.

- a. Objects appear on each actor's geographic display. Ensure the following:
- Sides of objects correspond (BLUE/RED/NEUTRAL).
  - Registration and update message are observed on wargame terminals.
- b. Ghost objects in each actor are at the same speed and course.
- c. Ghost objects in each actor are on the same course as that assigned by the owning actor.
- d. Ghost ship is deleted.

**Results By Ghosting Actors:**

**AWSIM:**

**MTWS:**

TEST STEPS	TEST VERIFICATION	TEST RESULTS
<p><b>Ghosting Objects - Bases</b></p> <p>a. For each actor that owns objects of class GROUND.BASE, create or relocate at least one BLUE, one RED, and one NEUTRAL base.</p>	<p>a. Objects from each controlling actor are observed in ghosting actor at same location. Ensure the following:</p> <ul style="list-style-type: none"> <li>• Sides of bases correspond (BLUE/RED/NEUTRAL).</li> <li>• Registration and update message are observed on wargame terminals.</li> </ul>	<p><b>Results By Ghosting Actors:</b></p> <p><u>AWSIM:</u></p>
<p><b>Ghosting Objects - HIMAD/ALLRAD/RADAR</b></p> <p>a. For each actor that owns objects of class .HIMAD, .ALLRAD, and/or .RADAR, create or relocate at least one BLUE and RED HIMAD, ALLRAD, and/or RADAR in each actor that may be ghosted by another actor.</p> <p>b. Place 1 or more ground objects at speed 0 in controlling actor. Place object at speed 10.</p> <p>c. Place 1 or more ground objects on heading 90.</p> <p>d. In controlling actor, split one object into two.</p> <p>e. In controlling actor, merge two objects into one.</p>	<p>a. Objects from each controlling actor are observed in ghosting actor at same location. Ensure the following:</p> <ul style="list-style-type: none"> <li>• Sides of objects correspond (BLUE/RED).</li> <li>• Registration and update message are observed on wargame terminals.</li> <li>• CBS_STATUS corresponds</li> </ul> <p>b. Ghost objects in each actor are at the same speed and course.</p> <p>c. Ghost objects in each actor are on the same course as that assigned by the owning actor.</p> <p>d. Two new ghost objects are created and the old ghost object is deleted.</p> <p>e. Ghosted objects merge into a single new object.</p>	<p><b>Results By Ghosting Actors:</b></p> <p><u>AWSIM:</u></p> <p><u>CSSTSS:</u></p> <p><u>MTWS:</u></p> <p><u>JECEWSI:</u></p>

TEST STEPS	TEST VERIFICATION	TEST RESULTS
<p><b>Ghosting Objects - TBMs/Cruise Missiles</b></p> <p>a. For each actor that owns TBMs or cruise missiles, launch at least one BLUE and one RED object that may be ghosted by another actor.</p>	<p>a. Objects from each controlling actor are observed in ghosting actor at same location. Ensure the following:</p> <ul style="list-style-type: none"> <li>• Sides correspond (BLUE/RED).</li> <li>• Registration and update message are observed on wargame terminals.</li> <li>• Course, speed, altitude, position and size (1) correspond.</li> </ul>	<p><b>Results By Ghosting Actors:</b></p> <p><b>AWSIM:</b></p> <p><b>RESA:</b></p>
<p><b>Ghosting Objects - SHORAD/Combat/Support Units</b></p> <p>a. For each actor that owns SHORAD, Ground Combat or Ground Support units, create or relocate at least one BLUE and one RED unit in each actor that may be ghosted by another actor.</p> <p>b. For each actor that owns objects of class GROUND.MANEUVER.COMBAT, in the controlling actor, split one object into two.</p> <p>c. In controlling actor, merge two combat units into one.</p>	<p>a. Objects from each controlling actor are observed in ghosting actor at same location. Ensure the following:</p> <ul style="list-style-type: none"> <li>• Sides of objects correspond (BLUE/RED).</li> <li>• All STATUS attribute values correspond.</li> <li>• Registration and update message are observed on wargame terminals.</li> </ul> <p>b. Two new ghost objects are created and the old ghost object is deleted.</p> <p>c. Ghosted objects merge into a single new object.</p>	<p><b>Results By Ghosting Actors:</b></p> <p><b>CBS:</b></p> <p><b>CSSTSS:</b></p> <p><b>MTWS:</b></p> <p><b>JECEWSI:</b></p>