Ithaca: An Unclassified Scenario Suitable for International Use

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Presented to:
Military Operations Research Society
Symposium, June 10 – 12, 2008
1. REPORT DATE  
01 JUN 2008

2. REPORT TYPE  
N/A

3. DATES COVERED  
-

4. TITLE AND SUBTITLE  
Ithaca: An Unclassified Scenario Suitable for International Use

5a. CONTRACT NUMBER  

5b. GRANT NUMBER  

5c. PROGRAM ELEMENT NUMBER  

5d. PROJECT NUMBER  

5e. TASK NUMBER  

5f. WORK UNIT NUMBER  

6. AUTHOR(S)  

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)  
Warfare Analysis & Integration Department Naval Air Warfare Center

8. PERFORMING ORGANIZATION REPORT NUMBER  

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)  

10. SPONSOR/MONITOR’S ACRONYM(S)  

11. SPONSOR/MONITOR’S REPORT NUMBER(S)  

12. DISTRIBUTION/AVAILABILITY STATEMENT  
Approved for public release, distribution unlimited

13. SUPPLEMENTARY NOTES  

14. ABSTRACT  

15. SUBJECT TERMS  

16. SECURITY CLASSIFICATION OF:  
a. REPORT  
unclassified  
b. ABSTRACT  
unclassified  
c. THIS PAGE  
unclassified  

17. LIMITATION OF ABSTRACT  
UU

18. NUMBER OF PAGES  
60

19a. NAME OF RESPONSIBLE PERSON  

Standard Form 298 (Rev. 8-98)  
Prescribed by ANSI Std Z39-18
What is Ithaca?

• Derived from the USWESTCOM Joint Intelligence Center scenario – Pacifica (2003)
  – Same geography, changed names, mostly same socio-political background
  – Updated/different Order of Battle (Red, Blue, and Green)
• Required an unclassified scenario for use in two joint US-UK projects
• Not currently a complete scenario
  – Currently naval air focused
  – Land forces, ISR forces, logistics forces not currently included
Island of Ithaca

Location in Pacific not representative, approximate center of Ithaca at 20N 165E, all coordinates shifted from actual US -10 deg by +280 deg
Background

- Primary source of revenue in Ithaca is export of ore from the Ithaca Mineral Fields (IMF) shared by Trinacria and Scheria
  - Trinacria and Scheria are uneasy partners in the IMF
  - Trinacria has dominant military and economy in Ithaca
  - Scheria plans to build infrastructure to garner a larger share of ore processing and shipping from Trinicria
- Economy of Cythera based primarily on forest products and fishing; Cythera is generally neutral
- Metals from IMF ore are vital to advanced communication technology around the world
- Trinacria seeks to retain dominant commercial role on Ithaca
  - Trinicria opposes building of Scherian infrastructure
Road to War

• 24 Nov 2020 (I-Day, D-34): Trinacria moves I and VI Corps ground forces to IMF ostensibly to protect IMF from militia attacks; forces conduct exercises
• 10 Dec 2020: Trinacria stages attack by “militia” in Scheria on Trinacria portion of IMF; publicly expresses concern about security of IMF
• 11 Dec (W-Day/C-Day, D-18) – BLUE intelligence reports indicate Trinacria preparing to move into Scheria; BLUE forces repositioned
• 20 Dec 2020 (E-Day, D-9): Trinacria invades Scheria (I and VI Corps) in response to staged attack to secure IMF; Trinacria missile & air defense spotted dispersing; chatter spikes at Trinacria nuclear facilities
• 21 Dec 2020: Scheria appeals to UN, US, NATO for help
• 26 Dec 2020: US and NATO agree to assist Scheria government in expelling Trinacria forces; UN Security Council passes resolution authorizing use of force
• 29 Dec 2020 (D-Day): Trinacria threatens to attack Coalition forces near coastal waters; repositions ballistic and cruise missile launchers
Trinacrian Ground Forces

- Corps Forces for Invasion
- Reserve/Defensive Corps Forces

Invasion Force
Trinacria will attempt a multiple layered defense of IMF airspace, consistent with their doctrine.

- 1 Air Defense Operations Center (ADOC) maintains national picture
  - Directly control AWACS
- 4 Zone Operations Center (ZOCs) = primary battle management elements
  - Controls all air defense elements in their zone
    - Fighter Interceptors
    - Strategic SAM Batteries
    - AAA Batteries
    - EW Radar
- Air Defense C2 centers correlate regional air picture; conducts GCI
- Trinacria defensive doctrine is based on multiple layers of defenses: interceptors, surface-to-air-missiles, and AAA.
Trinacrian Air Forces

24 x 2nd/3rd Gen Fighters
24 x 4th/5th Gen Fighters
24 x 2nd/3rd Gen Fighters
36 x 4th/5th Gen Fighters
24 x 4th/5th Gen Fighters
24 x 2nd/3rd Gen Fighters
84 x 4th/5th Generation Fighters
72 x 2nd/3rd Generation Fighters

Weapons: RF BVR and IR WVR

Aircraft arrayed to protect population centers and support a ground offensive in the south
Trinacrian Surface to Air Missile Sites

S-1-# = Strategic SAM 1
S-2-# = Strategic SAM 2
S-3-# = Tactical SAM 1
S-4-# = Tactical SAM 2
T-# = TBM Op Area

S-1 SAM and S-2 SAM will have tactical operating areas and sites around their strategic operating area; T-1 SAM and T-2 SAM will remain in their tactical operating area; T-3 SAM and T-4 SAM will move tactically as necessary to provide point defense and fill gaps in coverage. AAA, MANPADS found throughout region
Trinacrian Strategic SAM CONOPs and Timeline

• **Strategic SAMs (S-1 and S-2)**
  – Have 30 nmi x 30 nmi strategic operating area per battalion
    • Have nine 10 nmi x 10 nmi tactical operating areas per strategic operating area
      – Have five surveyed sites per tactical operating area
    • Will start in a random tactical operating area (1 – 9) within the strategic operating area
    • One to three times per day will move to a new site within the same tactical operating area
    • Every 2 – 4 days will move to a new random tactical operating area within the same strategic operating area
      – Tactical operating areas may be re-visited
Trinacrian Sample Strategic SAM Operating Area

S-1 strategic operating area 1 near Sacramento
Trinacrian Sample Tactical Operating Area

S-1 tactical area 3, strategic operating area 1, near Sacramento
Trinacrian Tactical SAM CONOPs and Timeline

- **Tactical SAMs (T-1 and T-2)**
  - Have 10 nmi x 10 nmi tactical operating area per battalion
    - Have ten surveyed sites per tactical operating area
    - Will stay in the same tactical operating area
    - One to three times per day will move to a new site within the same tactical operating area
      - Sites may be revisited
    - Being used in more of an area defense role

- **Tactical SAMs (T-3 and T-4)**
  - Have no pre-defined operational areas
  - Move as needed to provide point defense of high value assets/targets
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Trinacrian Sample Tactical Operating Area

T-1 SAM site in Bishop, CA
Trinacrian Naval Threats

- 12 FF
- 6 FFG
- 8 Submarines
- 24 PTG
- 24 PTB
- ASCMs (16 land based launchers, ~700 missiles land, submarine and sea-launched)
- 36 Aircraft (Maritime Patrol and ASW/ASuW Helicopters)
### Trinacrian Ballistic Missile Threat

<table>
<thead>
<tr>
<th>System</th>
<th>Status</th>
<th>Range</th>
<th>Missiles</th>
<th>CW Warheads</th>
<th>Launchers</th>
<th>Reloads/TEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRBM Type 1</td>
<td>OP</td>
<td>400km</td>
<td>294</td>
<td>None</td>
<td>10</td>
<td>29.4</td>
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<tr>
<td>SRBM Type 2</td>
<td>OP</td>
<td>700km</td>
<td>295</td>
<td>Possible</td>
<td>15</td>
<td>19.6</td>
</tr>
<tr>
<td>MRBM</td>
<td>OP</td>
<td>2,250km</td>
<td>121</td>
<td>Possible</td>
<td>25</td>
<td>4.8</td>
</tr>
</tbody>
</table>

- **TBM Area 1** = Stockton, CA (38N, 121.3W)
- **TBM Area 2** = Independence, CA (36.8N, 118.2W)
- **TBM Area 3** = Near Barstow, CA (35.1N, 116.8W)

Each area is a 50nmi (radius) circle centered on the given location (approx 7,854 nmi²)
Trinacrian TBM Launch Area Ranges

TBM Area 1:
- 700km Ring
- 12 MRBM TELS
- 5 SRBM T2 TELS

TBM Area 2:
- 400km Ring
- 10 SRBM T1 TELS

TBM Area 3:
- 700km Ring
- 13 MRBM TELS
- 10 SRBM T2 TELS

MRBM can reach anywhere in Ithaca
Trinacrian TBM CONOPS and Timeline

- Two launch waves per day
  - Launch wave one 0600 – 1000
  - Launch wave two 1800 – 2200
- Depart random hide site enroute to launch site
  - Timed to attempt to have all launches within a 25 minutes or less window
  - Launch site not more than 80 km (43 nmi), not less than 8 km (4.3 nmi)
    - Travel time assumed as straight line distance, average speed of 40 kph (21.5 mph)
  - Approximately 1/3 of MRBM and ½ of SRBM involved in each wave
  - No restriction on re-use of launch sites by other TELs, individual TELs will not re-use a site
- After arrival at launch site, launch occurs in:
  - 14 – 22 minutes for SRBMs
  - 25 – 35 minutes for MRBMs
  - All launch sites assumed pre-surveyed
- After launch, departure occurs in:
  - 1 – 3 minutes for SRBMs
  - 3 – 6 minutes for MRBMs
- Depart launch site for new hide site
  - Hide site not more than 80 km (43 nmi), not less than 8 km (4.3 nmi)
    - Travel time assumed as straight line distance, average speed of 40 kph (21.5 mph)
  - No restriction on re-use of hide sites by other TELs, individual TELs will not re-use a site
- Continue pattern until one of three conditions met:
  - TEL is destroyed by Blue attack
  - TEL runs out of reload missiles
  - TEL suffers irreparable malfunction and is rendered inoperable

TBM departure time derived from Time article “The Great Scud Hunt” dated 12/23/02 citing 6 minutes. (UNCLASSIFIED Document)
Trinacrian TBM Launch Area 3

115 Hide sites (H#)
230 Launch sites (L#)
13 MRBM TELs
10 SRBM Type 2 TELs

Operating area centered near Barstow, CA (35.1N 116.8W)

Close examination of sites may indicate a site resides in an impossible location, like a lake, however this is due to the resolution used in the coordinates, rounded degree, minute, second. Any site appearing this way should be moved slightly to an acceptable location.
Trinacrian EW/GCI Radar CONOPs

- Trinacria has 35 Early Warning/Ground Control Intercept (EW/GCI) radars, most are relocatable
  - 4 fixed sites
  - 31 relocatable sites
- Each relocatable radar has 5 sites to operate from
  - ZOC 1 has 5 EW/GCI radars (25 sites)
  - ZOC 2 has 9 EW/GCI radars (45 sites)
  - ZOC 3 has 9 EW/GCI radars (45 sites)
  - ZOC 4 has 8 EW/GCI radars (40 sites)
- Any of the radars within a ZOC may use any operating site
  - Sites may be reused by different radars
  - An individual radar may not return to a site it has previously used
- Individual radars relocate at a random time interval between 30 and 72 hours
  - No restriction on distance traveled during relocation
  - Moves will be timed to maintain radar coverage, i.e. maximum of 2 radars moving at once
Trinacrian ASCM CONOPs

- Trinacria has 16 ASCM launchers
  - 6 in the San Francisco Bay area (Northern area)
  - 10 from Baja California to north of Los Angeles
  - 10 ASCMs have a range of 162nmi (300km) and 6 have a range of 70nmi (130km); this does not correspond to the above 6 and 10 launcher groups
- Each ASCM launcher has 5 sites to operate from
- Any of the ASCMs within an area may use any operating site
  - Sites may be reused by different ASCMs
  - An individual ASCM may not return to a site it has previously used
- ASCMs only fire/unhide when presented with a target, then relocate
  - No distance restriction on relocation within the Northern/Southern area
Scheria Forces

Large Geographic Area
Relatively Small Population
Small Habitable Area

Phoenix
24 x F-16C
12 x TORNADO GR.Mk 1
Combat Helos

Tucson
1 x FF
8 x PTG (OSA-II)
10 x PTB

Ogden
24 x TORNADO GR.Mk 1
12 x F-16C

Salt Lake
1 x FF
8 x PTG
10 x PTB

Albuquerque
12 x F-16C
Combat Helos

Albuquerque
8 x PTG
10 x PTB

2 x Infantry Divisions
1 x Border Guards Brigade
Coalition Campaign Objectives

- Defeat Trinacria’s attack into Scheria and Expel Trinacrian forces
- Restore Internationally Recognized Border and Restore Control of Ithaca Mineral Fields to Status Quo Ante
- Neutralize Trinacria’s Offensive Capabilities, Including WMD if Present
## Proposed Target List

### Target List Summary

<table>
<thead>
<tr>
<th>Target type</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manuever/Relocatable</strong></td>
<td></td>
</tr>
<tr>
<td>Air Defense Artillery</td>
<td>1750</td>
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<tr>
<td>APC/IFV</td>
<td>1640</td>
</tr>
<tr>
<td>Artillery</td>
<td>2000</td>
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<tr>
<td>MRL</td>
<td>970</td>
</tr>
<tr>
<td>Infantry Divisions</td>
<td>15</td>
</tr>
<tr>
<td>Special Brigades</td>
<td>10</td>
</tr>
<tr>
<td>Tanks</td>
<td>1600</td>
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<tr>
<td>Combat Support Vehicles</td>
<td>3000</td>
</tr>
<tr>
<td>Radars</td>
<td>104</td>
</tr>
<tr>
<td>Tactical SAM TELARs</td>
<td>46</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>11135</strong></td>
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<tr>
<td><strong>Maritime</strong></td>
<td></td>
</tr>
<tr>
<td>Ships (FF, FFL)</td>
<td>18</td>
</tr>
<tr>
<td>Patrol Craft</td>
<td>48</td>
</tr>
<tr>
<td>Submarines</td>
<td>8</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>74</strong></td>
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<tr>
<td><strong>Strategic Fixed Targets</strong></td>
<td></td>
</tr>
<tr>
<td>Airfield</td>
<td>27</td>
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<tr>
<td>EW/GCI Radars</td>
<td>4</td>
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<tr>
<td>SATCOM Antennas</td>
<td>10</td>
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<tr>
<td>GPS Jammers</td>
<td>15</td>
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<tr>
<td>Highway Bridges</td>
<td>200</td>
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<tr>
<td>Conv. Wpn Production/Storage</td>
<td>100</td>
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<tr>
<td>POL Distribution/Storage</td>
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<tr>
<td>Air Defense C2</td>
<td>40</td>
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<tr>
<td>Telecom Facilities</td>
<td>250</td>
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<tr>
<td>Electric Power Distribution</td>
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<tr>
<td>CBRNE Production/Storage</td>
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<tr>
<td>National C2 Facilities</td>
<td>40</td>
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<tr>
<td>Road Chokepoints</td>
<td>30</td>
</tr>
<tr>
<td>Rail Chokepoints</td>
<td>30</td>
</tr>
<tr>
<td>Missile Support Facilities</td>
<td>20</td>
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<tr>
<td>Combat Service Support Base</td>
<td>90</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1095</strong></td>
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<tr>
<td><strong>Listed on other Worksheets</strong></td>
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<tr>
<td>Strategic SAM TEL</td>
<td>40</td>
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<tr>
<td>Tactical SAM TELARs</td>
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<tr>
<td>Ballistic Missile Launchers</td>
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<tr>
<td>ASCM Launchers</td>
<td>16</td>
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<tr>
<td>EW/GCI Radars</td>
<td>31</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>191</strong></td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>12495</strong></td>
</tr>
</tbody>
</table>

Each Target May Have Multiple Components/ Aimpoints

Each Strategic Fixed Target site has coordinates in actual US reference and in shifted “Ithaca” reference in the Pacific Ocean

Each of the sites “Listed on other Worksheets” have multiple sets of coordinates in US reference and “Ithaca” reference
Target Coordinate Sets

- 1,095 Fixed Sites
- 450 SAM Sites
- 750 TBM Sites
- 155 EW/GCI Sites
- 80 ASCM Sites
- 2,530 TOTAL
Site descriptions are initial assessments and are open to discussion. Bunkers are a mixture of more and less challenging hardness. C2 bunkers, CBRNE bunkers and some portion of ammunition bunkers at CSS sites and airfields are harder and the rest of the bunkers are less challenging as a starting position.
Coalition Air Bases Available

- Boise
- Salt Lake
- Ogden
- Albuquerque
- Phoenix
- Tucson
- El Paso
Notional US Naval Forces in Theater (D-Day)

- 2 x CSG (CSG #3 Arrives D+17)
  - 1 CVN, 1 CG, 2 DDG, 1 SSN, 1 T-AKE
  - 44 Strike/Fighters (F-18E/F, F-35) Per Airwing + 10 UCAV
- 2 x ESG
  - 1 LHA(R), 1 LPD, 1 LSD, 1 CG, 1 DDG, 1 DD(X), 1 SSN
  - 6 Strike/Fighters (F-35) Per LHA(R)
- USMC Shore-Based Strike Fighters: 60 (F-35)
- 4 x SSN
- 1 x SSGN
- 1 x MDSAG
  - 1 CG, 2 DDG
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US, Scheria Maritime Forces in Theater, D-Day

Scheria Maritime Forces Have No Land Attack or Air/Missile Defense Capabilities
USN/USAF D-Day Air Forces

- **USAF**
  - 254 Total Fighter/Strike Aircraft
    - 24 F-16CJ
    - 173 F-35
    - 58 F-22
  - 30 Total Bombers
    - 10 B-1B
    - 10 B-2
    - 10 B-52H

- **USN**
  - 88 Total Fighter/Strike Aircraft
    - 48 F-18E/F, 40 F-35 in 2 CSGs
  - 20 Total UCAV
    - In 2 CSGs

- **USMC**
  - 72 Total Fighter/Strike Aircraft
    - 12 F-35 in 2 ESGs
    - 60 F-35 Ashore

USAF has 61.3% of Fighter/Strike aircraft (not including UCAV) and 100% of dedicated bombers. If UCAV is included in total, then USAF has 58.5% of Fighter/Strike aircraft on D-Day. Phase III with CSG #3 (44 more fighters and 10 more UCAV) – USAF has 55.5% without UCAV, 52% with UCAV

RAF contribution has been placed at 48 Typhoons + 12 UCAV
WARGAME Lessons Learned

- Not detailed enough for traditional wargame
  - Suited for Military Judgment Panel (MJP)
  - Was found to have value in context of MJP
- Alternative scenario determined, but not played
  - Start with some Blue ground and land based air forces already in Scheria due to Flexible Deterrent Options, D-7
  - Southern portion of Scheria defects to Trinicria and claims IMF, Trinicria initiates movement into IMF, D-Day
  - Altered Red forces:
    - Add 24 B-6 Bombers with air launched cruise missiles, precision guided munitions, and stand-off weapons
    - Changed TBM mix for fewer MRBM (15 launchers/60 TBMs), more SRBM (20 Type 1 SRBM launchers/350 TBMs, 15 Type 2 SRBM launchers/300 TBMs)
    - Added more SAMs to allow extending IADS into newly annexed territory (1 S-1, 2 S-2, 2 S-3, 3 S-4)
BACKUP
Airfields
Airfields - 2

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Adelanto Logistics Field
Highway Bridge

Tower Bridge, Sacramento
Highway Bridge - 2

Pacific Coast Highway, HWY 1
Conventional Weapon Production/Storage
Conventional Weapon Production/Storage - 2

Rosarita, Mexico
UNCLASSIFIED

POL Production/Storage

West Carson, CA
POL Production/Storage - 2

South of Taft, CA
Air Defense C2

Chico, CA
Telecom

Victorville Tower, 156 m
Telecom - 2

Santa Ana Tower, 18.3 m
Electric Power Distribution

La Paloma Power Project
Electric Power Distribution - 2

Kramer’s Junction Transformer Yard
CBRNE Production/Storage

China Lake, CA
CBRNE Production/Storage - 2

Livermore, CA
Road Chokepoint

I-580/980 Oakland, CA
Road Chokepoint - 2
Rail Chokepoint
Rail Chokepoint - 2

Sacramento, CA
Rail Chokepoint - 3

Bakersfield, CA
Missile Support Facility (TBM)

Cartago, CA
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Missile Support Facility (SAM)
UNCLASSIFIED

Combat Service Support Base

Off I-8 CA
UNCLASSIFIED

Combat Service Support Base - 2

Sierra Army Depot, CA
85 Hide sites (H#)
170 Launch sites (L#)
12 MRBM TELs
5 SRBM Type 2 TELs

Operating area centered on Stockton, CA (38.0N 121.3W)

Close examination of sites may indicate a site resides in an impossible location, like a lake, however this is due to the resolution used in the coordinates, rounded degree, minute, second. Any site appearing this way should be moved slightly to an acceptable location.
50 Hide sites (H#)
100 Launch sites (L#)
10 SRBM Type 1 TELs

Operating area centered on Independence, CA (36.8N 118.2W)

Close examination of sites may indicate a site resides in an impossible location, like a lake, however this is due to the resolution used in the coordinates, rounded degree, minute, second. Any site appearing this way should be moved slightly to an acceptable location.
## Campaign Concept of Operations

<table>
<thead>
<tr>
<th>C-Day</th>
<th>PHASE I: DETER /DEPLOY/DEFEND</th>
<th>PHASE II: SEIZE INITIATIVE</th>
<th>PHASE III: DOMINATE</th>
<th>PHASE IV/V: STABILIZE</th>
<th>Boundary Restored</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHASE I: Objectives</td>
<td>• Deploy Forces (Air/Sea/Land)</td>
<td>• Expand air/pace superiority into Trinacria</td>
<td>• Counterattack to destroy Trinacrian forces</td>
<td>• Redeploy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Protect Forces</td>
<td>• Reduce Strength of Trinacrian Forces in Scheria</td>
<td>• Restore boundary</td>
<td>• Assist in monitoring compliance (UN Control of IMF)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Collect Intelligence</td>
<td>• Destroy Key Trinacrian C2 and War-Related Infrastructure</td>
<td>• Maintain air and space superiority</td>
<td>• Conduct DCA/Enforce No-Fly Zone</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Maintain air superiority over Scheria (DCA)</td>
<td>• Destroy WMD delivery</td>
<td>• Neutralize Trinacria’s Offensive Capabilities</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>• Conduct Deterrence Operations</td>
<td></td>
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<tr>
<td>D-Day</td>
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Derived From Joint Publication 5-0: Joint Operations Planning