

 VR-Forces**USER TRAINING SYLLABUS**

This 4.5-day course will provide in-depth training on the VR-Forces computer generated forces product. The first section will focus on basic concepts, the High-Level Architecture (HLA) and connecting VR-Forces. The course includes demonstrations and workshops where the trainees will have the opportunity to see and work directly with the software. This daily syllabus is flexible, based on the number of questions and interests of the trainees.

The course is designed to provide in-depth knowledge of how to use VR-Forces. This includes scenario creation, merging scenarios, configuration, and development using the VR-Forces toolkit. During the course, trainees will participate in hands-on workshop exercises.

Instructor:

Date:

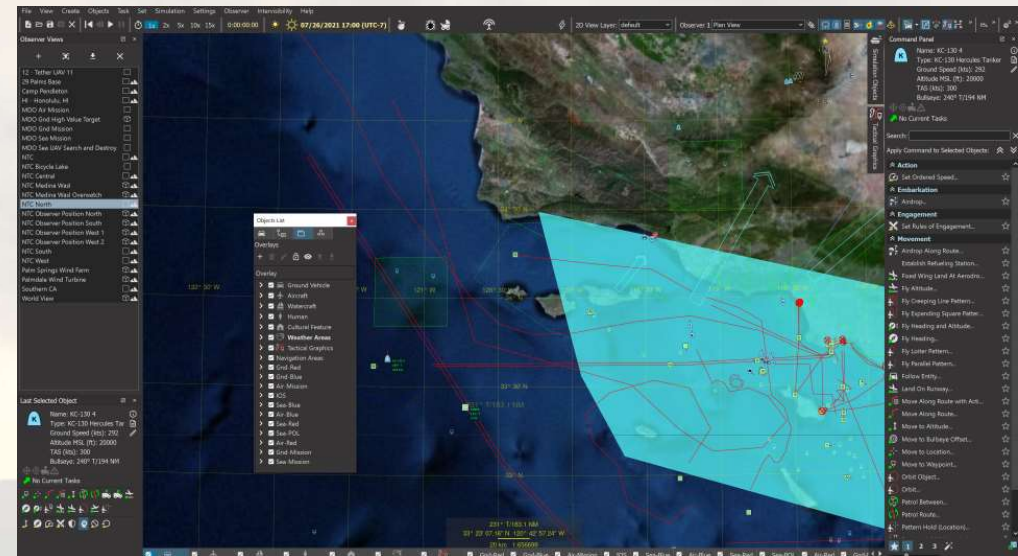
VR-Forces Basics and Overview

- Overview of Computer-Generated Forces (CGF)
- Toolkit vs. Application
- Multiple Levels of Simulation
 - Entity Level
 - Aggregate Level
- VR-Forces Architecture and Features
 - Sensor, actuator, controller architecture

Use of VR-Forces as an Application

- Introduction the GUI
- Creating scenarios
- Creating Simulation Objects
- Creating Control Objects
- Tasking Simulation Objects
 - Task Visualization
- Controlling the simulation
- Changing Simulation Object State
- Workshop: Creating a simple scenario
- Creating Background Traffic
 - Pedestrian Areas

- Pattern of Life
- Creating Plans
- scenario Events
- Intelligence Objects
- Embarkation
- **Workshop: Using plans in a scenario**

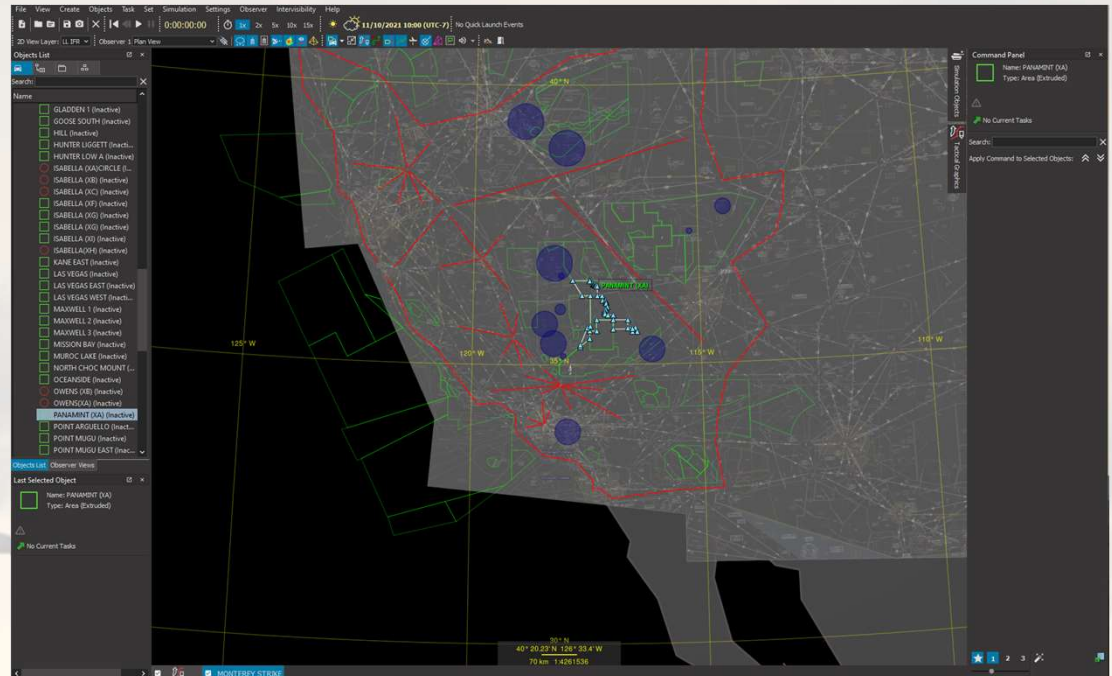


Individual Object Capabilities

- Aggregate Level vs Entity Level
 - Definitions—Aggregated Units vs Disaggregated Units
 - Creating Units
- Individual Level Capabilities
 - Entity Level Units
 - Movement
 - Embarkation—Embedded Simulated Objects
 - Weapons
 - Laser Designation
 - Artillery-Tasked
 - Artillery-Indirect Fire Events
 - Missiles
 - Ballistic Missiles
 - Cruise Missiles
 - Torpedoes
 - Counter Measures
 - Tactical Smoke
 - Depth Charges
 - Naval Mines
 - Grenades
 - IED Model
- Aggregate Level Capabilities
 - Unit Composition
 - Posture
 - Movement
 - Embarkation
 - Combat Engineering
 - Sensors
 - Intelligence Collection Areas
 - Electronic Warfare
 - Direct Fire Weapons
 - Artillery
 - Air Defense
 - Single Munition Attacks
 - NBC Attacks
 - MOPP Level
 - Logistics
- General Capabilities
 - Sensors
 - Intel Collection Areas
 - Entity-delivered Tasks & Sets
 - Spot Reports
- **Workshop: Adding scenario events and global plans into scenarios**

Viewing Simulated Object Information

- Object Lists
 - Object
 - Entity
 - Environmental
 - Echelon
 - Embarkation
 - Overlays
- Simulated Object information
 - Entity Level
 - Aggregate Level
- Overlays
- Weather/Environment
- Intervisibility
- Sensor Effects
- Radio Communication Lines
- **Workshop: Using overlays in scenarios**



Scenarios

- Scenario Files
 - Order of Battle
 - Plan
 - Global Plan
 - Object Map
 - Scripted Tasks
 - Scenario Settings
 - Observer Views
 - Scenario Extras
- Scenario Loading Process

Settings

- Types
- Options
- Display Settings
- Application Settings

Other GUI Functions

- Join Session

- Military Scenario Definition Language (MSDL)
- Scenario Checkpointing
- Batch Mode

Run-Time Configuration Options

- Configuration and Command Line Options
- ***Workshop: Creating and running scenarios with multiple back-ends***

Toolbar Reference

SECTION 2: AGGREGATE MODEL (OPTIONAL)

Movement

- Movement Model
- Movement Modifiers

Detection

- Sensor Model
- Sensor Signatures
- Signature modifiers
- Emissions
- Detecting NBC(Nuclear, Biological, Chemical) Areas
- Detecting Engineering Objects
- Detection Tables
- Sensor Contacts in the GUI

Combat

- Categories of Combat
- Combat Power
- Direct Fire Combat Model
- Artillery/Bombardment Model
- Single Munition Attack Model
- Electronic Warfare Attack Model

Attrition

- Damage Model
- Attrition of personnel
- Attrition of equipment and supplies
- Attrition of ammunition



SECTION 3: VR-FORCES PARAMETER CUSTOMIZATION

Customization through Parameter Modification

- Simulation Model Sets
- Object types & matching
- Using the VR-Forces Simulated Object Editor
 - Entity Level Model Set
 - Aggregate Level Model Set
- Using the VR-Forces OPD Editor
- Creating new objects
 - Simulation Object Groups
 - Thru the Simulated Object Editor
 - Workshop: Creating new objects and running in a scenario
- Physical world parameters

Configuring Sensor Systems

- Sensor model overview
- Signature modifiers & propagators
- Display in GUI
- **Workshop: Create new sensor system and add to new object**

Configuring Weapon Systems—Entity Level

- Parameter tables

- Probability tables - hit, damage, kill, detection
- Ammo select tables

Configuring Weapon Systems—Aggregate Level (Optional)

- Creating weapon resources
- Creating and adding assemblies

Adding a Weapon System

Workshop: Create new weapon system and add to new object

Models

- Schemas
- Model definitions
- **Workshop: Create new tactical graphic**

Customization through Lua Scripting

- Using Existing Task Scripts
- Creating a New Task Script
 - scenario Specific Scripts
 - System Scripts
 - Reactive tasks
- **Workshop: Create a New Task Script**

SECTION 4: TERRAIN

Creating/Loading Terrain

- Introduction and overview
- Converting from other formats
 - Types supported
 - Import options

Dynamic Terrain

Composing terrain via GUI

- Adding terrain patches
- Adding imagery
- Adding vector features
- Extracting props from feature layer
- Extracting props from terrain layer

Navigation Areas

- Creating Navigation Areas
- Editing Navigation Areas
- Troubleshooting

Streaming Terrain

- Loading terrain server
- Paging in terrain
- Terrain Page-in Area
- Extracting props from terrain
- Adding detailed terrain cut-ins
- **Workshop: Create a new terrain server**

Procedural Terrain

