

## ► Qinisa - Vehicular Command and Control Software

The Vehicular Command and Control Software (VCSS) is a real-time geospatial software application for the Vehicular Command and Control Computer (VCCC) which is a real-time computer server system for a wide range of military and para-military vehicular command and control applications.

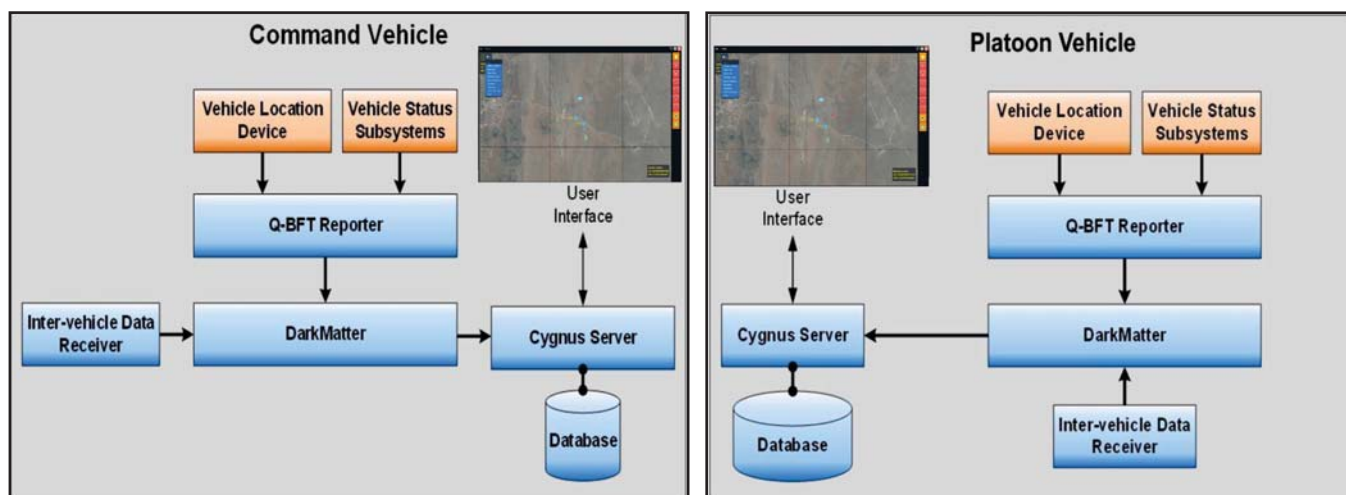
### Functions

The CVCSS will typically provide the following functions :

- receive Own Position Data from internal or external GPS
- distribute Own Positional Data to other vehicles and C2 Vehicles over Tactical Radio System (TRS) or Satellite Communications System (SCS)
- receive Blue Force Positional Data from other vehicles over TRS
- provide Tactical Data and Vehicle Status Data to HMI and C2 vehicles over TRS
- derive and provide the Common Operating Picture
- download and store Tactical Maps from C2 vehicles during battle preparation phases
- download, store and display Integrated Battle Plans (IBPs) from C2 vehicles during battle preparation phases
- display cached Tactical Maps on vehicle HMI
- display enemy positions and vehicle sightings and distribute to other vehicles and C2 element

### Blue Force Tracking and Situational Awareness

- implements Blue Force Tracking (BFT) in a 2D/2.5D/3D geospatial interface depending on user requirements
- uploads maps and battle plans/orders created during Battle/Mission Preparation phase for layering in BFT/C2 geospatial interface
- serves Tactical Maps developed during the operations planning phase for caching/storage in vehicular-based Qinisa BFTR-enabled vehicles during reorganisation phases / tactical pauses
- serves Tactical Constructs / Orders overlays as maps in vector or raster formats
- indicates enemy positions and vehicles and distribute to other vehicles and C2 element
- implements Geofence ingress and egress alert zones to monitor battle phase progress
- monitors Situational Awareness / Common Operating Picture (COP) from fixed or static Headquarters locations (if network infrastructure and radio propagation conditions allow)



Vehicular Command and Control Software Architecture

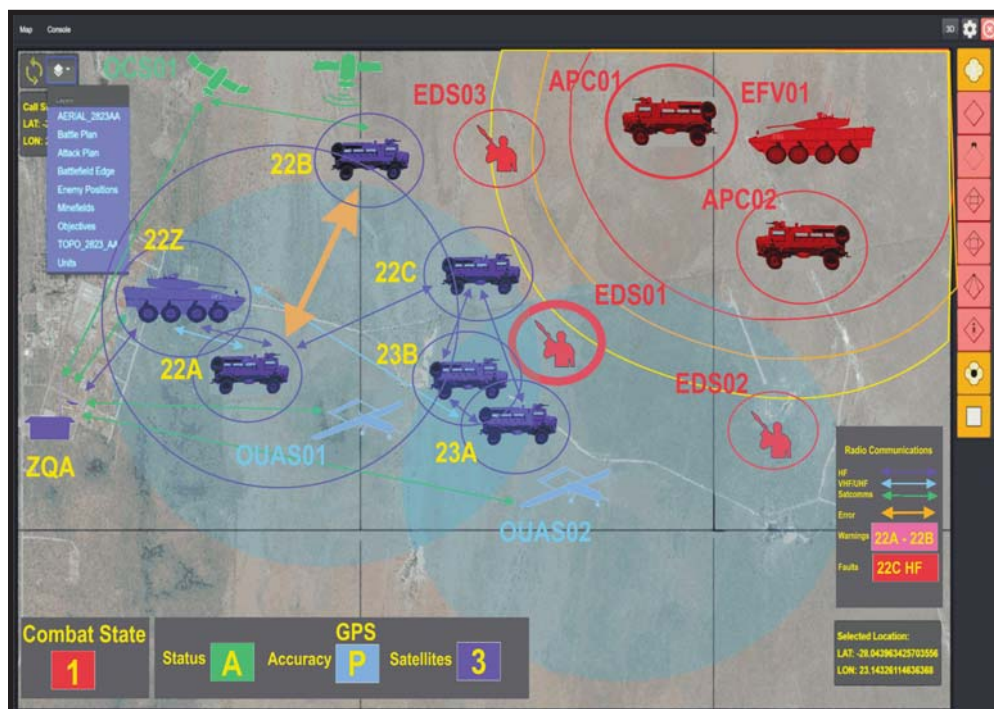
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### Features

- Cost-Effective
- Open Architecture
- Distributed Topology
- COTS Components
- Linux-based (Suse, Red Hawk)
- Single or Replicated Architectures
- Linearly Scalable
- Functional flexibility according to customer requirements, budget and external communications infrastructure
- Fully compatible with hybrid GIS environments where proprietary and open source GIS tools are used
- Integrates with GIS tools such as viewshed analysis for *Intelligence Preparation of the Battlespace (IPB)*, etc.
- Flexibility – all vehicles can act in a multi-role capacity providing battle redundancy
- Multi-sensor / multi-source data logical bus
- Joint Force interoperability for operational and strategic overview through tracking of mobile entities in a COP environment
- Vehicle-Tethered Geofences
- *Train As You Fight* – operational system is used for training
- Post Operational / Training Exercise Data Analysis
- After Action Review (AAR) playback functionality

### Standards

- Open Standards 2D/2.5D/3D Geospatial Interface
- Digital Elevation Model (DEM) support
- MIL-STB-2525C, MIL-STD-2525D *Common Warfighting Symbology* compliant



Vehicular Command and Control Computer  
Human-Machine Interface  
(HMI)