



## Voice Command and Control System (VCCS)

The IP based Voice Command and Control System (VCCS) is a next generation communication system which suits the need of Defence, Homeland Security and Disaster Management agencies.

### FEATURES:

- Fully IP based architecture (Server-Gateway)
- Interface between HF-VHF-UHF Radios and Multiple Protocols
- Ruggedized as per JSS 55555 and Complies with Global Mil Standards
- Operates both in manned/ unmanned conditions
- Ruggedized Touch Interface IP Console
- In-built cards for Voice/ Video/Data

### Description

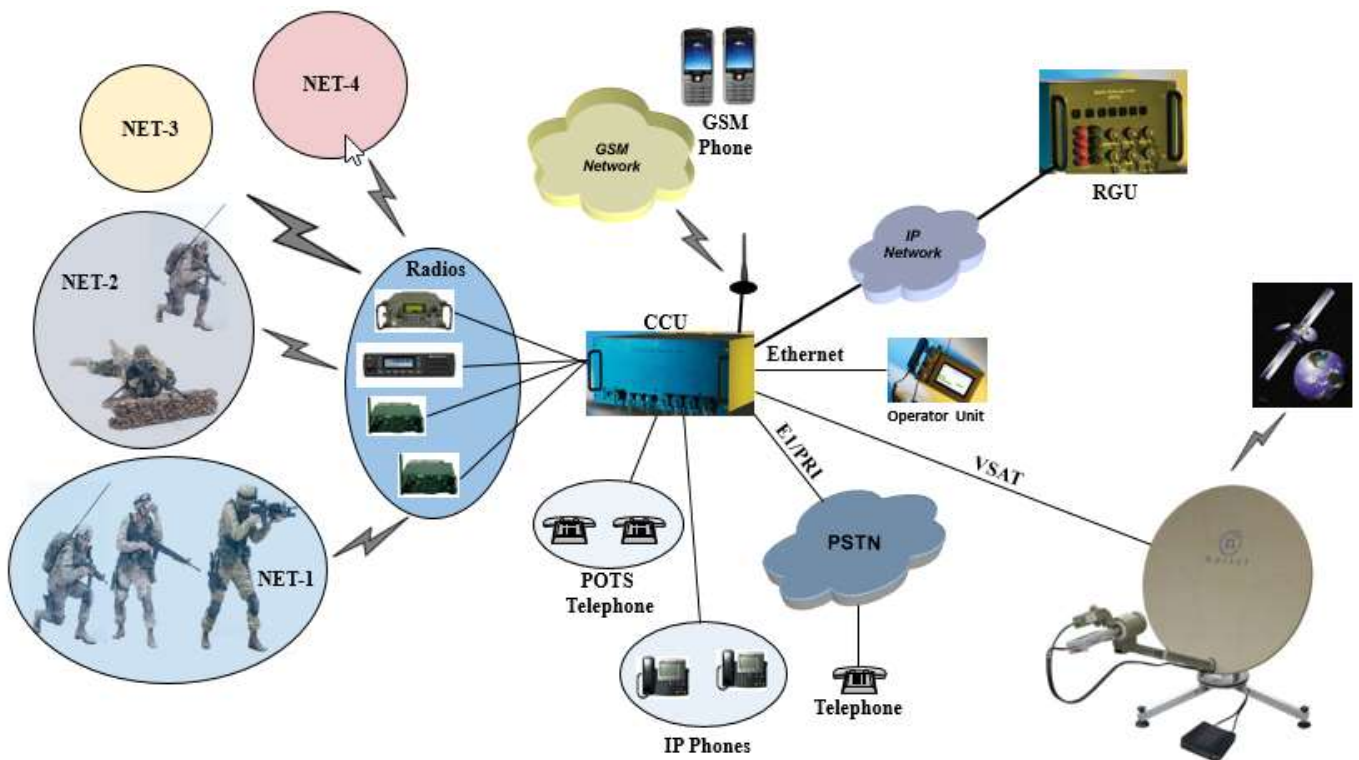
VCCS is based on distributed architecture, wherein different components of the system can be distributed over geographically different locations and are integrated over an IP network.

This distributed model is based on next generation soft switch architecture as specified by ITU- T. The main switching of VCCS resides in an IP based soft switch, which forms the core of the VCCS.

### Command and Control Unit (CCU)

CCU is the core of VCCS. It hosts the soft switch, which does the switching of voice streams between various gateway units of the system. The main database and the control information are stored in the CCU

CCU has an optional built-in console, which can be used by the operator for call control and management of the system. For purposes of redundancy, a standby CCU can be installed in the network.



### Network Architecture

The network of VCCS has all types of Interfaces to interconnect FXO, FXS, BRI, E&M, Magneto, IP, E1/PRI, Satellite, HF/VHF/UHF Radios, GSM/CDMA, TETRA, Router, Ethernet, Mapper, XDSL, BWT, NX64 and Network telephones. Functionality of each component is explained in the next section.

### Components of VCCS

VCCS consists of three major components (CCU, RGU, AO) which are connected over an IP network). Each of the component is IP enabled and gets connected to the IP network over a 10/100Mbps ethernet interface.

CCU has a built-in Ethernet switch with PoE support. PoE support is available for the Operator console units.

CCU is a complete system in itself and can function as a Single Box Gateway, if remote end radios or protocols are not required to be connected over Ethernet i.e. in a stand - alone mode. It also has a universal port architecture.

## Remote Gateway Unit (RGU)

RGU is a low powered radio interface unit. RGU is connected to the radios using the audio and control interfaces of the radio.

RGU is agnostic to the make of the radio and its frequency of operation. It converts the audio and control signals received from the radio to IP packets and transmits them to the CCU for further processing, over an IP link.

RGU has dual Ethernet links, each of 10/100 Mbps bandwidth for connecting to the IP network. The dual Ethernet link is provided for meeting redundancy requirements. The configuration can be done from the Operator console unit.



## Advanced Operator Unit (AOU)

AOU is an IP based Operator console with Touch Input facility. AOU is used by operators/dispatchers of VCCS system, for call handling and management purposes. AOU will be connected to the CCU on POE. AOU can also be locally powered. AOU has a 7-inch Touch screen, on which one touch buttons will be available for call handling purposes and for configuring VCCS system.

The Touch Screen can also be used for configuring and accessing the Voice Logger Unit (VLU). AOU has an audio interface for connecting a wired handset or headset for voice communication. Wireless headset can also be connected to AOU. Multiple AOU's can be connected to VCCS.



