C4IA

1 Team Members

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2 Problem Statement

A `mobile ad-hoc network` communication system for military, for operations in areas with no internet infrastructure. Deployed units can stream audio, video and sensors readings to command Centers. Command Centers can stream audio and message codes to some/all unit(s).

3 Motivation

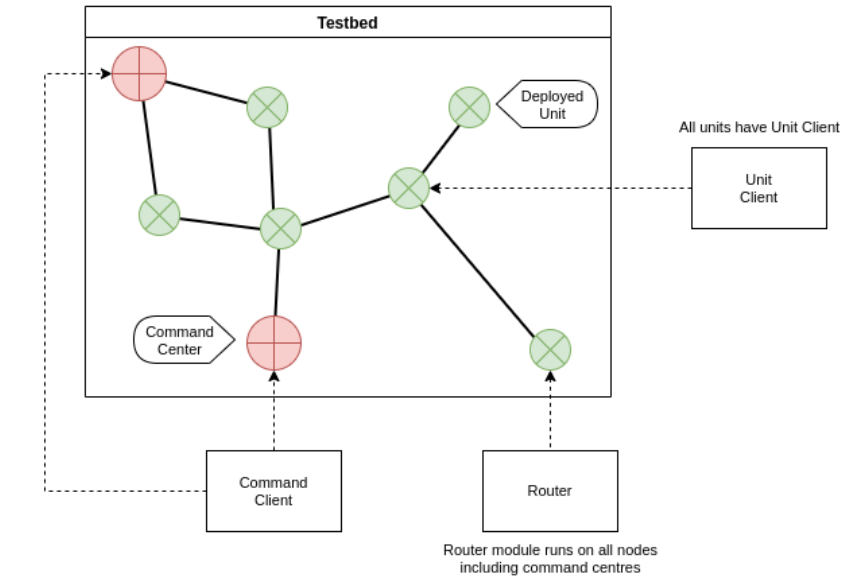
The military needs to perform live data-analysis, communicate effectively over large distances. Ad-hoc networks promise more flexibilty than manual radio broadcasting.

We are also interested in building distributed systems.

4 System Architecture

Figure 1 shows the modules diagram.

5 List of Deliverables



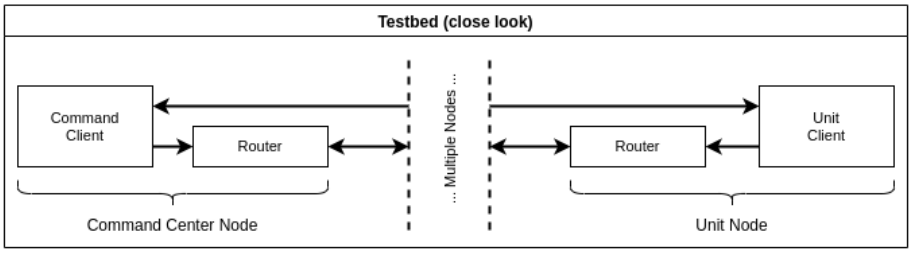


Figure 1: Modules Diagram

Module Name	Function	Input	Expected Output	% of used Libraries
Unit Client	Stream and receive streams to/from command centers	Device audio, video, sensors and message codes. Streams and messages from command centers	Send streams and show play audio/messages	TODO
Cmd. Center Client	Stream and receive streams to/from deployed units. Shows a map of all units with their statistics	Audio and message codes. Streams and messages from deplyed units	Send streams and show play audio/messages	TODO
Router	Determine how a certain ip-packet should be forwarded. Implements some `MANET` ad-hoc protocol	IP packet (with final destination) to forward	Path from this node to final destination	TODO
Testbed	Build, configure and monitor the simulation/emulation of the `MANEt`. Define the topology and mobility model	User commands and arguments or configuration file	Commands to emulation, simulation or actual-HW	TODO