

# Joint Biological Tactical Detection System (JBTDS) Overview

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## Joint Biological Tactical Detection System

- The JBTDS Will Be a Lightweight Biological Agent Detector That Will Detect, Warn and Provide a Sample Isolation Capability.
- The Detector Will Be Networked to Provide a Cooperative Detection Capability to Increase the Probability of Warning and Reduce the Probability of False Alarm.
- Each JBTDS will be capable of acting in two modes:
  - A Biological Agent Detector Mode
  - Command Module Mode
- The Network Capabilities Will Include Both Hardwire and Wireless Interfaces to Provide Maximum Flexibility in Fixed Site and Remote Application.

**Network of tactical lightweight generic detectors that will detect, warn, and provide sample isolation capability**

# Employment Concept

## JBTDS High-Level Operational Concept Graphic (OV-1)

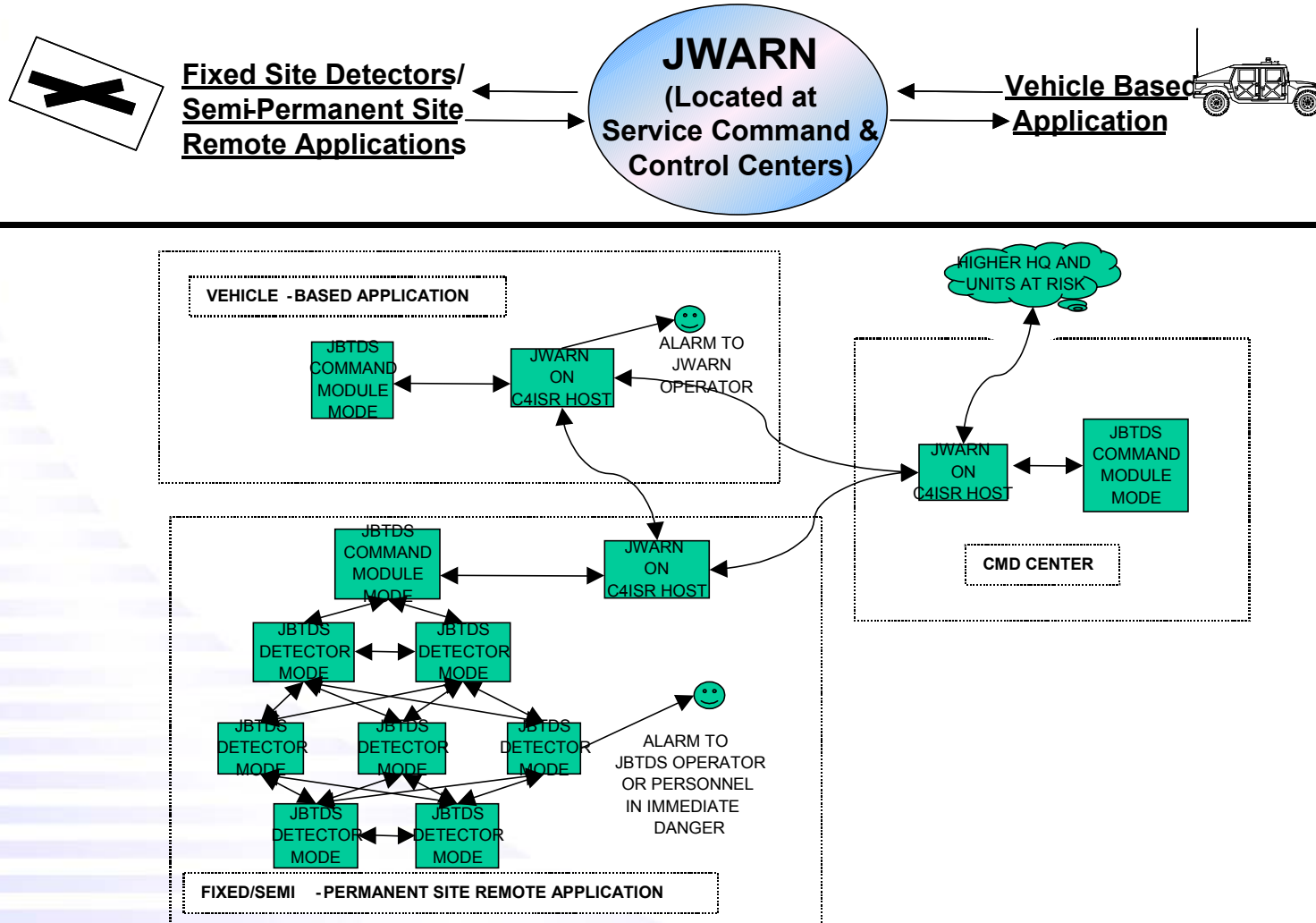


Figure 1: JBTDS OV-1

## Partial Requirements List

	Threshold	Objective
Detect airborne bio material*	Detect presence of airborne biological material consistent with a BW agent release at a Pd of 90 %	Detect presence of airborne biological material consistent with a BW agent release at a Pd of 95 %
Detect cloud concentrations	Consistent with operationally significant dose of each BW agent within 1 minute	Consistent with operationally significant dose of each BW agent in real time
Mobility	Stationary operation	Detect while on-the-move from ground, air or sea platforms
MTBMF	≤ 168 hours per array	Same as Threshold
Weight / Size	≤ 35 pounds, ≤ 1 ft <sup>3</sup>	≤ 17 pounds, ≤ 1/2 ft <sup>3</sup>
Set-up Time	≤ 5 minutes	Same as Threshold
Operating Temperature	-28°C to +50°C	Same as Threshold

## **Technologies Barriers**

- **Reduced False Alarm Rate**
- **Power Generation and Utilization**
- **Communications and Network Software Management  
(Autonomous Operation and Integration With Other Networks)**
- **Advanced Construction Materials to Reduce Weight and Increase  
Survivability**
- **Discrimination of Relevant Biological Material From Background**
- **Efficient, Lightweight Collectors**

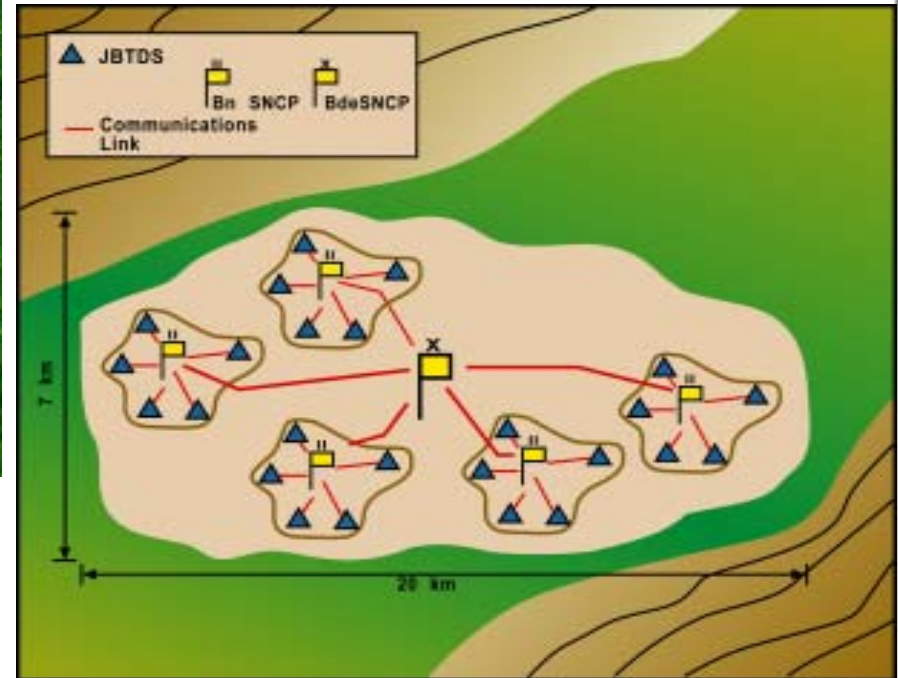
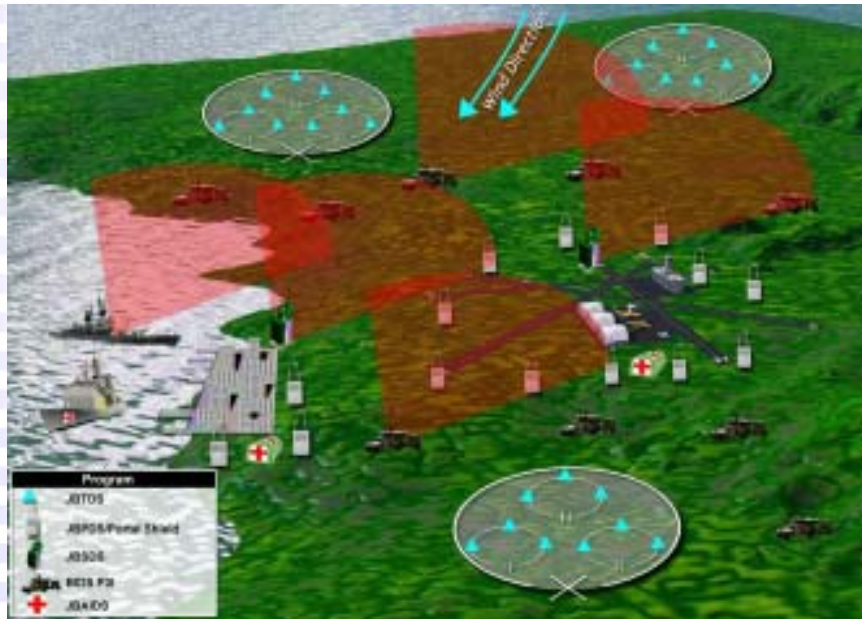


## Schedule/ Industry Opportunities

- **Program Initiation** **FY06**
- **IOC** **FY08**
- **FOC** **FY12**
  
- **Technology Readiness Evaluation** **1Q04**
- **RFP System Development/Demonstration** **FY06**

## Summary / Challenges

Employed As a Network at Wing, Battalion, Squadron & Lower Levels



- Participate in Technology Readiness Evaluations
- Balance Sensitivity, Weight, Power, Unit Cost, & False Alarm Rate