



# Maneuver Support Center and Chemical, Biological, Radiological, and Nuclear School America's Army Training Device Integration

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# Maneuver Support Center (MANSCEN)

Chemical, Biological,  
Radiological, and Nuclear  
School  
(CBRN School)



# Software Engineering Directorate, Aviation and Missile Command, Redstone Arsenal AL

Program Manager for  
Reconnaissance and Platform  
Integration,  
Edgewood MD

# Nuclear, Biological, Chemical Reconnaissance Vehicle (NBCRV) Stryker M1135



# Business End of NBCRV



**Sensor  
Intake  
Head**

**Sampling  
Wheels**

# WHAT WAS THE CHALLENGE?

- Partial Task Crew Trainer
- Sensor control
- SPG and FBCB2



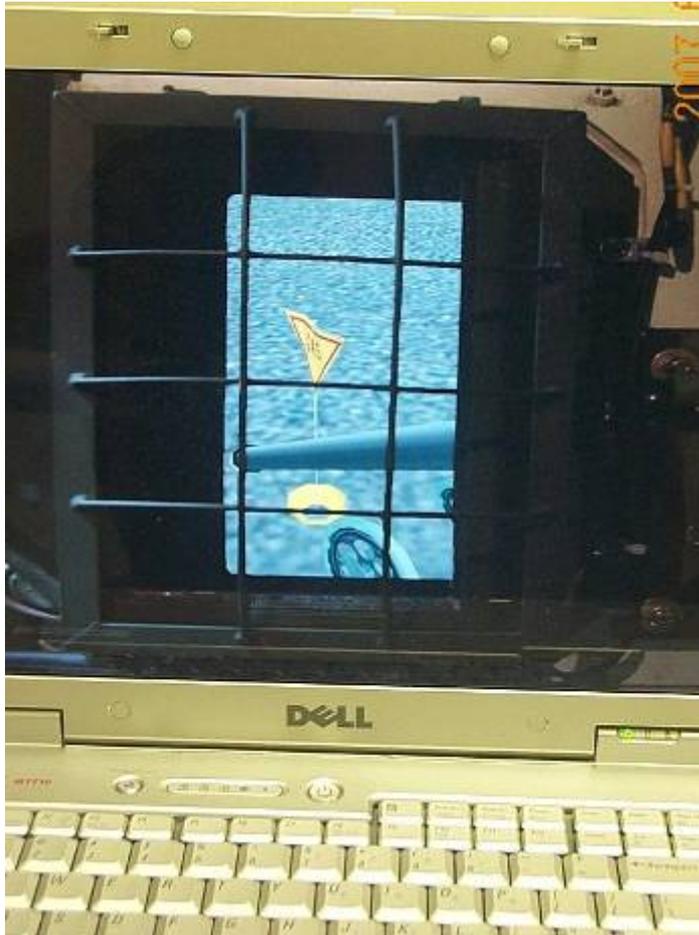
# CBMS Sensor



**The Chemical-Biological Mass Spectrometer (CBMS) is the main workhorse for detection and identification**



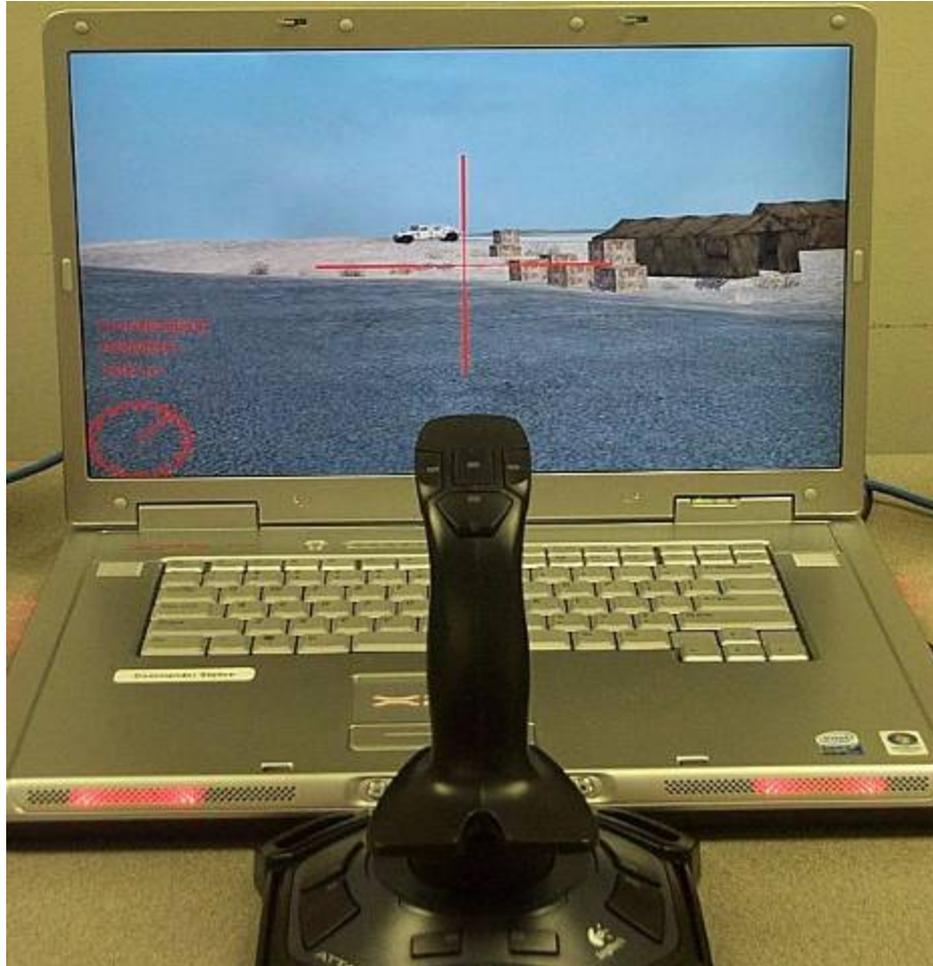
# DWSS



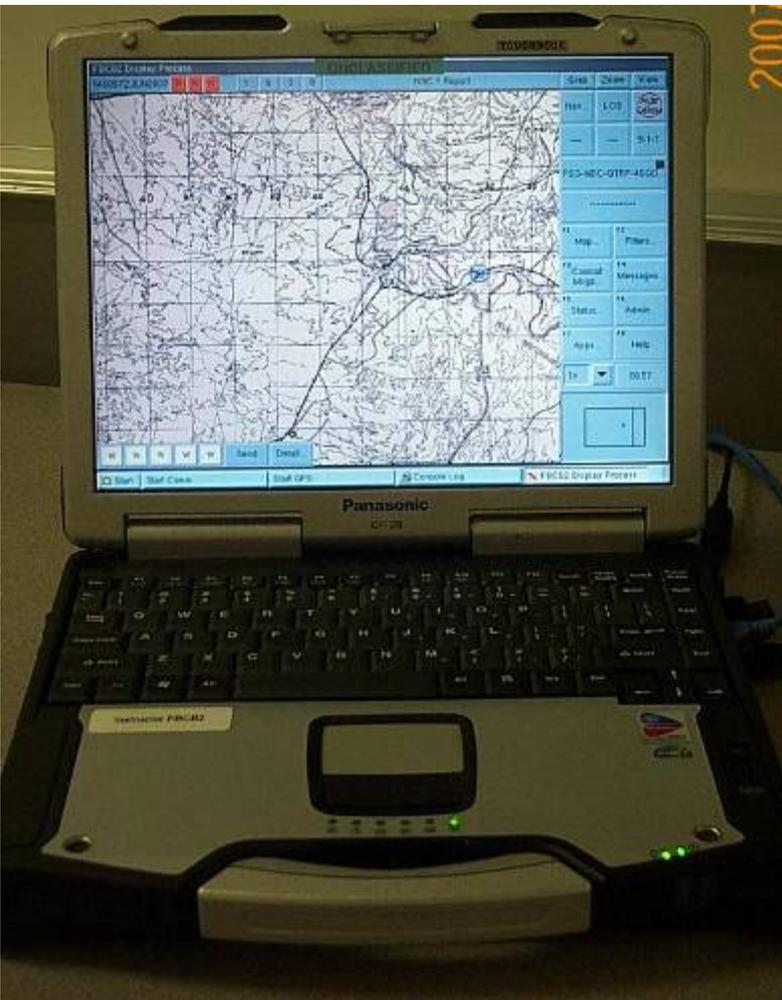
## Dual Wheel Sampling System (DWSS) Controls



# Remote Weapon Station



- RWS vehicle Commander screen
- Regular and 10x zoom
- Visual and IR sites



- FBCB2 on a Toughbook®
- Commander & Training Supervisor have screen



# Driver Station





# Surveyors Station





# After Action Review



- **Tracks route of vehicle on map**
- **Highlight marks for key events**
- **Shows actual area of contamination**
- **Crew discusses missions**
- **Highlight FBCB2 messages**



# After Action Review



Blue Force | Place Item | Map Filter | Environment | Misc.

- Dismounted	
- [MBCRV1]	[Status Icon]
Driver	[Status Icon]
Surveyor	[Status Icon]
Commander	[Status Icon]
- [MBCRV2]	[Status Icon]

```
(09:03:01) DWSS: MBCRV1 set to auto mode.  
(09:05:50) DWSS: MBCRV1 set to manual mode.  
(09:05:51) DWSS: MBCRV1 set to standby mode.  
(09:06:39) MBCRV1 probe lowered  
(09:06:51) MBCRV1 probe raised  
(09:06:56) MBCRV1 chem flag dropped.  
(09:08:43) MBCRV1 chem flag dropped.  
(09:10:14) MBCRV1 chem flag dropped.  
(09:11:38) MBCRV1 chem flag dropped.
```



## Dismounted Reconnaissance Missions

- **Small unit missions**
- **Add sensors to AA scenarios**
- **Add protective suits and gear**
- **Not part of online game**



# FINAL THOUGHTS