Joint Mobile Command and Training Center
Monmouth University
Rapid Response Institute
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Monmouth University’s RAPID RESPONSE INSTITUTE
Joint Mobile Command and Training Center “Truck”

Monmouth University’s Rapid Response Institute (RRI) was awarded a $1 million contract to design and build a Joint Mobile Command and Training Center (JMCTC) “truck.” RRI worked with Homeland Intelligence Technologies (HIT) to create the physical design of the truck and its incorporated facilities (heat, power, tables, etc.). The communications networks were designed with the assistance of Center of Excellence for Remote and Medically Underserved Areas (CERMUSA) of Saint Francis University, Loretto, PA, and the computer thin client networks were designed with the assistance of the Program Executive Office for Command, Control, and Communications Tactical-Special Projects Office (PEOC3T-SPO) Fort Monmouth, NJ. RRI leveraged their extensive knowledge on mobile communication platforms, vehicle-based re-locatable communications, and tele-training.

The RRI Joint Mobile Command and Training Center truck allows for the testing and deployment of integrated software applications and real-time database systems for effective use in training, exercise, and response to all hazards and real-time support in the event of emergency for first responders and their managers across central New Jersey. The RRI is evaluating these systems and applications across the state by direct interaction with local, county, and state emergency responders to research effective ways to enhance Unified Incident Command as well as preparedness, response, and recovery capabilities. In addition, the truck will be utilized for training of the Community Emergency Response Team (CERT) at Monmouth University.

The Monmouth University Rapid Response Institute, under the authority of the University’s School of Science, was established in August, 2004. RRI will develop and manage technologies to help central New Jersey to more effectively monitor, anticipate, and respond to bioterror incidents and other potential large-scale events.
Joint Mobile Command and Training Center Exterior Views

The photographs below depict the external views of the Joint Mobile Command and Training Center “truck.” Note the “bump-out” portion of the vehicle, which allows for more command space once the vehicle has reached its destination. The awning allows for some weather-protected exterior command space as well. Please follow the link below to the “JMCTC External Walkthrough” video on youtube for a virtual tour of the exterior of the command vehicle. The tour is conducted by David Kaplan, Engineer, at the Northeast Regional Response Center at Fort Dix:

JMCTC External Walk-through:
http://www.youtube.com/watch?v=5VP3QOXOFEw
Joint Mobile Command and Training Center

Interior Views

Below are photographs depicting the internal views of the Joint Mobile Command and Training Center “truck.” Note the first photograph illustrates the screen of the security cameras view of the outside area surrounding the vehicle. The second photograph illustrates the MapSketch table included in the bump-out portion of the vehicle. Please follow the links below to view the youtube videos of the “JMCTC Overview” and a “MapSketch” demonstration:

JMCTC Overview:
http://www.youtube.com/watch?v=4cSFyy-MZSw

MapSketch:
http://www.youtube.com/watch?v=mlf6cAifSVc&feature=PlayList&p=9641DCBB71DACC9F&index=0
Joint Mobile Command and Training Center Capabilities

- **Network:**
  - Thin Client Environment
    - HP Thin Client
    - Using two HP Servers running VM Ware and Windows Server 2003 with Citrix Server Software
  - External Network Access
    - Capable of connecting to an external network

- **Broadband Satellite Communications:**
  - 1.2 Meter Satellite Dish
  - Tracstar Modem
  - Clear Channel Broadband Service
  - Average Download Data Speed 1500 Kbps
  - Average Upload Data Speed 384 Kbps

- **On the Move Satellite with DirecTV Service**

- **IP Phone Access:**
  - Voice Over IP Communications
  - Soft Phones—virtual phone able to display on each desktop to be used with a headset on the thin client for each user
  - Up to 20 voice lines available
Joint Mobile Command and Training Center Capabilities

- **Security Cameras:**
  - Connected through a DVR
  - On display at all times to give a 360 degree view of the truck from inside, as there are no windows in the vehicle
  - Portable wifi camera
  - Security camera is available for remote viewing

- **RF Interoperability:**
  - Motorola XTL 2500
  - Kenwood Radio
    - Low Band (35—43 MHz)
    - VHF Band (148—174)

- **2 LCD TV Displays:**
  - In front of vehicle
  - One for cable TV
  - Other uses such as streaming video feed from helicopter

- **Multi-Screen Video Wall:**
  - In rear of vehicle
  - 4-Screen Video Wall
  - Veemux Videoswitches
  - KVM Video switch

- **Video Tele-Conferencing:**
  - Tandberg VTC Unit
  - Video switch output can be sent over call
  - Security camera output can be sent over call

- **Overhead Projector:**
  - Projects to full-size pull-down screen

- **Power:**
  - Two 12 KW Diesel Generators
  - Shore Power, 120 Volt
    - Truck can easily plug into external power, just as an RV
Joint Mobile Command and Training Center Capabilities

- **Emergency Lights:**
  - Siren Control Unit
  - External Bullhorn Speaker and Mic
  - 16 Red/Blue Emergency around the periphery of the vehicle
Joint Mobile Command and Training Center Capabilities

- **MapSketch Projection Table:**
  - [MapSketch](http://www.youtube.com/watch?v=mlf6cAiFSVc&feature=PlayList&p=9641DCBB71DAC9F&index=0)

- **Strategy Table:**
  - Consists of MapSketch table and wide screen HD display which is excellent for a group of people to “hunker down” and plan operations during an emergency as well as draw on the map using the MapSketch.
## Joint Mobile Command and Training Center Demonstrations

<table>
<thead>
<tr>
<th>Date</th>
<th>Name of Event</th>
<th>Location</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 10, 2007</td>
<td>NOAA/Coast Guard Air Cadet Training Session and Remote Control of Unmanned Boats in Chesapeake Bay plus Congressional Visit</td>
<td>Capitol Hill, Washington, DC</td>
<td>D</td>
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<tr>
<td>July 30, 2007</td>
<td>Delaware Training Exercise</td>
<td>Dewey Beach, DE</td>
<td>XS</td>
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<tr>
<td>August 5, 2007</td>
<td>Haskell Race</td>
<td>Monmouth Park Racetrack, Oceanport, NJ</td>
<td>E</td>
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<tr>
<td>October 27-28, 2007</td>
<td>Breeders' Cup</td>
<td>Monmouth Park Racetrack, Oceanport, NJ</td>
<td>E</td>
</tr>
<tr>
<td>April 29, 2008</td>
<td>Truck Demo</td>
<td>Fort Monmouth, NJ</td>
<td>D</td>
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<tr>
<td>May 8 and July 23, 2008</td>
<td>Truck Demo for Defense Research Board</td>
<td>Fort Dix, NJ</td>
<td>D</td>
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<tr>
<td>July 14, 2008</td>
<td>NJIT/NJ Business Force</td>
<td>Newark, NJ</td>
<td>D</td>
</tr>
<tr>
<td>October 6 – 10, 2008</td>
<td>STAR-TIDES Demonstration</td>
<td>Fort McNair, Washington, DC</td>
<td>D</td>
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<tr>
<td>September 26, 2009</td>
<td>Joint MRC/CERT Exercise w/Monmouth County OEM</td>
<td>Wolfe Hill Recreational Area, Oceanport, NJ</td>
<td>XC</td>
</tr>
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### KEY

- **D** = Demonstration
- **X** = Exercise
- **E** = Events
- **L** = Local
- **C** = County
- **S** = State
- **F** = Federal

A list of demonstrations, exercises, and events appear above with demonstrations of our emergency response capabilities denoted by a D, exercises denoted by an X followed by a L,C,S,F, or M representing local, county, state, federal, or military participation, and with events denoted by a single E.
On September 26, 2009, the RRI participated as a support command and control vehicle for the joint Medical Reserve Corps (MRC) and Monmouth County Community Emergency Response Teams (CERTs) to support a hurricane exercise which included all responders such as law enforcement, medical/EMS, and search and rescue teams with both ground and air assets.
# Joint Mobile Command and Training Center Demonstrations

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<tr>
<td>June 10 – 24, 2010</td>
<td>JUICE Live Shooter Exercise</td>
<td>Fort Monmouth, NJ</td>
<td>XF</td>
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<tr>
<td>July 16 – 18, 2010</td>
<td>Last “Hooha”</td>
<td>Fort Monmouth, NJ</td>
<td>E</td>
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<tr>
<td>August 25, 2010</td>
<td>Thunderbirds – Command and Control for EMS</td>
<td>Atlantiety, NJ</td>
<td>E</td>
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<tr>
<td>October 4 – 8, 2010</td>
<td>STAR-TIDES Demonstration</td>
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Joint Mobile Command and Training Center

Demonstrations

Colts Neck High School
2009 Emergency Response Exercise
Colts Neck, NJ
October 21, 2009

On October 21, 2009, the Monmouth County Emergency Response Team (MOCERT) Tactical Dispatch Team gathered to conduct a drill of a terrorist attack at Colts Neck High School. The mission was to respond to a scripted scenario involving an active shooting incident which turns into a static barricade inside the school building.
Joint Mobile Command and Training Center—CWID ‘07

- Monmouth University RRI and St. Francis University CERMUSA participated, via invitation through NSA and ECBC, to provide a Mobile Command Center (MCC) vehicle for “proof of concept” for joint operations use by the military and first responder community.

- To that end, the MCC utilized the Disaster Management Interoperability System (DMIS) to provide Command and Control and Common Operating Picture (COP) for joint operations. DMIS participated in the CWID trials in 2007.

- During the trials, commercial products such as E Team and My State, and the government product CAPWIN, were used by CWID participants playing roles as local and state responders.

- Real time video warfighter reconnaissance were demonstrated between the JMCTC and the CERMUSA MCP.

- RRI’s Joint Mobile Command and Training Center’s effort, as part of the U.S. Army’s Edgewood Chemical Biological Center’s (ECBC) Coalition Warrior Interoperability Demonstration (CWID’07) Team, was awarded First Place for the Integrated Information Management System (IIMS) Interoperability Trial Demonstration by the International Association of Emergency Managers (IAEM) Technology & Innovation Awards, Division 2, State/Regional National Government, International for Non-Profit Organization. The IIMS demonstrated that Interoperability is possible among multiple organizations and disparate technologies.
CWID ‘07 RECEIVES FIRST PLACE AWARD

The Rapid Response Institute and Joint Mobile Command and Training Center’s effort, as part of the U.S. Army’s Edgewood Chemical Biological Center’s (ECBC) Coalition Warrior Interoperability Demonstration (CWID’07) Team, was awarded First Place for the Integrated Information Management System (IIMS) Interoperability Trial Demonstration by the International Association of Emergency Managers (IAEM) Technology & Innovation Awards, Division 2, State/Regional National Government, International for Non-Profit Organization. The IIMS demonstrated that interoperability is possible among multiple organizations and disparate technologies.

ECBC’s Joint Science and Technology Office (JSTO) sponsored a tech-based effort called Shared Common Operating Picture (Shared COP) for Homeland Security and Homeland Defense. The Shared COP objective was to demonstrate end-to-end interoperability escalation capability from the civilian first responder to the emergency manager to the Department of Defense and back down. The demonstration built a temporary global network over which cutting edge communications technologies interact to support scripted scenarios. Technologies were evaluated for utility, interoperability with existing and new systems, and security.

The emergency management applications of MU’s Joint Mobile Command and Training Center truck were communicating using satellite communications (SATCOM) from the Defense Threat Reduction Center’s (DTRC) locations at the Dahlgren Naval Warfare Station and Fort Belvoir back to the Department of Homeland Security’s Open Platform Emergency Network (DHS OPEN) servers and then via Unclassified but Sensitive Internet Protocol Router Network (NIPRNET) to the CWID network and host site in Dahlgren, VA. Messages received in Dahlgren were converted by the Integrated Information Management System (IIMS) from the Common Alerting Protocol (CAP), used by civilian first responders, to the United States Message Text Format (USMTF), used by the military. The CWID exercise simulated a biological attack on the United States, and emergency messages were passed to and from the unclassified to classified arena via data guard software to the military’s Joint Warning and Reporting Network (JWARN) and Joint Effects Model (JEM) systems, tracking the events as they unfolded. This was the first successful demonstration of full interoperability between civilian and secure military emergency management software systems.

The IAEM Technology & Innovation Awards recognize the development of technology and innovation to improve emergency management operations, public education, or the emergency management/homeland security field. The 2007 Technology & Innovation Awards were presented at the IAEM 55th Annual Conference & EMEX 2007, November 11-14, 2007, in Reno, NV.

The International Association of Emergency Managers (IAEM) is a non-profit organization consisting of more than 4,000 emergency management professionals from local, state, and federal governments, the military, private industry, and volunteer organizations. IAEM has consistently promoted the goals of saving lives and protecting property during emergencies and disasters since its founding in 1952 as the U.S. Civil Defense Council.
Vehicle Specifications

Haulmark 33' Motorcoach
Freightliner M-2 Chassis
350 HP Caterpillar Diesel Engine,
6 Speed Eaton Fuller Ultrashift transmission

The following items are included in the base price:

- COACH BUILT WITHOUT WINDOWS
- 12' SUPER ELECTRIC SLIDEOUT WITH AWNING
- WEATHERPRO 20' POWER AWNING
- 9 WORKSTATIONS WITH OVERHEAD CABINETS WITH STANDARD ROLLING OFFICE CHAIRS
- ELECTRIC OUTLETS AND ALL NEEDED WIRING TO EACH WORKSTATION W/ADDITIONAL WIRING FOR
  3 ADDITIONAL WORKAREAS IN SLIDEOUT
- VIRTUAL WINDOW CAMERA SYSTEM THREE CAMERA HOUSINGS 3 FIXED CAMERAS EACH
- 19” LCD TV SCREEN
- 19” LCD Camera Monitor Screen
- ALL WHITE POWDER COAT EXTERIOR EXCEPT TRIM
- 6 EXTERIOR QUARTZ FLOODLIGHTS
- LIGHT OAK INTERIOR WALLS AND CABINETS WITH WHITE BOARD ABOVE WORKSTATIONS
- LIGHT OAK CABINET DOORS ON VIDEO WALL WITH WHITE BOARD EXTERIOR
- UNDERBODY STEEL STORAGE COMPARTMENTS W/CARPETED FLOORS
- 2X3 TUBULAR STEEL FLOOR FRAME
- ALL TUBULAR ALUMINUM CAGE CONSTRUCTION[WELDED]
- TONGUE N GROOVE 3/4” PLYWOOD FLOOR COVERED WITH RUBBER COIN FLOORING
- ALL WALLS, FLOORS, CEILINGS INSULATED
- ELECTRIC BRAKE CONTROL
- EXTERIOR LED BRAKE AND MARKER LIGHTS
- RECEIVER HITCH W/7 WAY BARGMAN CONNECTOR
- RUBBERIZED UNDERCOATING
- ELECTRIC STEPS
- 2 36” EXTERIOR SIDE DOORS
- AUTO LIGHTS IN STORAGE COMPARTMENTS
- ONE PIECE ALUMINUM ROOF
- LP/CO & SMOKE DETECTORS WITH FIRE EXTINGUISHER
- 3-13,500 BTU ROOF MOUNT AC WITH HEAT STRIPS AND THERMOSTAT (3 15,000 BTU DuoTherm)
- 20,000 BTU GAS FURNACE (deleted)
- CD/DVD/AM/FM STEREO RECEIVER WITH RECESSED SPEAKERS
- CABLE TV HOOKUP
- PADDED VINYL CEILING
- 7/2” INTERIOR HEIGHT
- TWO 12 KW DIESEL GENERATOR POWER
- 2000 WATT INVERTER AUXILLARY BACK UP POWER WITH 4 DEEP CYCLE BATTERIES
- 55 AMP CONVERTER W/50 AMP SERVICE AND SHORE CORD
- ELECTRIC OUTLETS AND ALL NEEDED WIRING TO EACH WORKSTATION
- ALL INTERIOR LIGHTING AS NEEDED
- COMPUTER AND COMPONENT STORAGE RACK AND COAT CLOSET IN REAR
- AUTOMATIC 4 LEG HYDRAULIC LEVELING SYSTEM
- OBSERVATION DECK ON ROOF WITH FOLD UP RAILINGS
- 175# LP TANK FOR FURNACE (deleted)
- REMOTE BACK-UP CAMERA

• External shore power and water connections are included