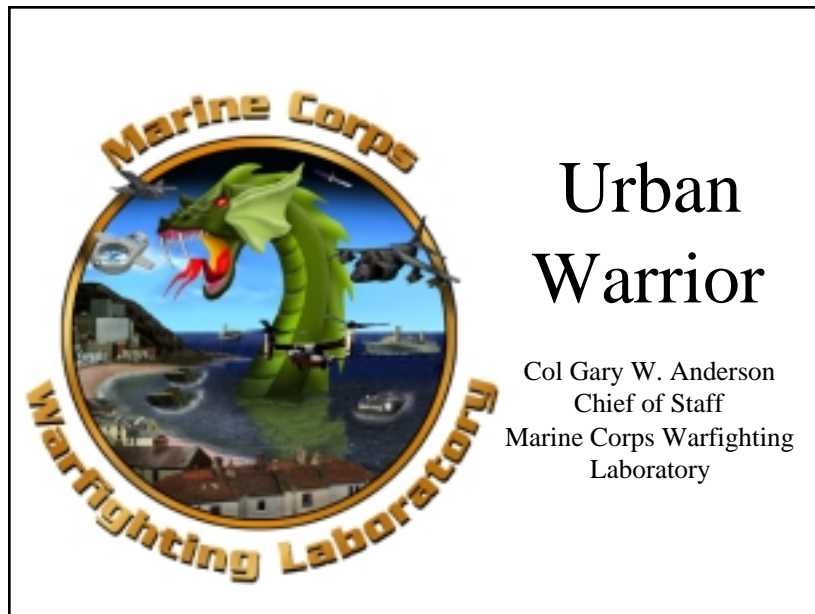
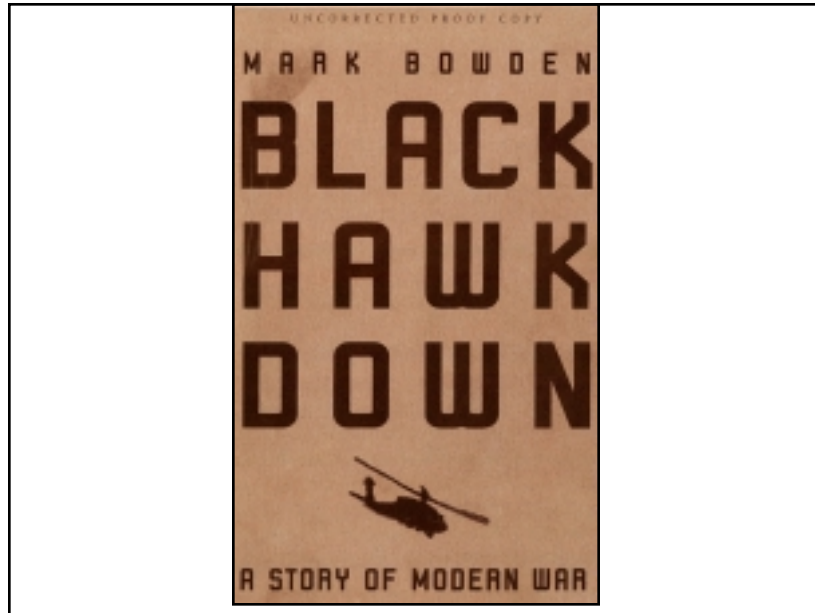

URBAN WARRIOR AND USMC URBAN OPERATIONS
Col Gary Anderson, USMC





This book outlines some key problems of urban combat:

- Urban Navigation.
- Urban Communication.
- Civilians intermixed with fighters.
- Cultural Intelligence.

What is the Marine Corps doing about it? One example is the Squad Radio solution.

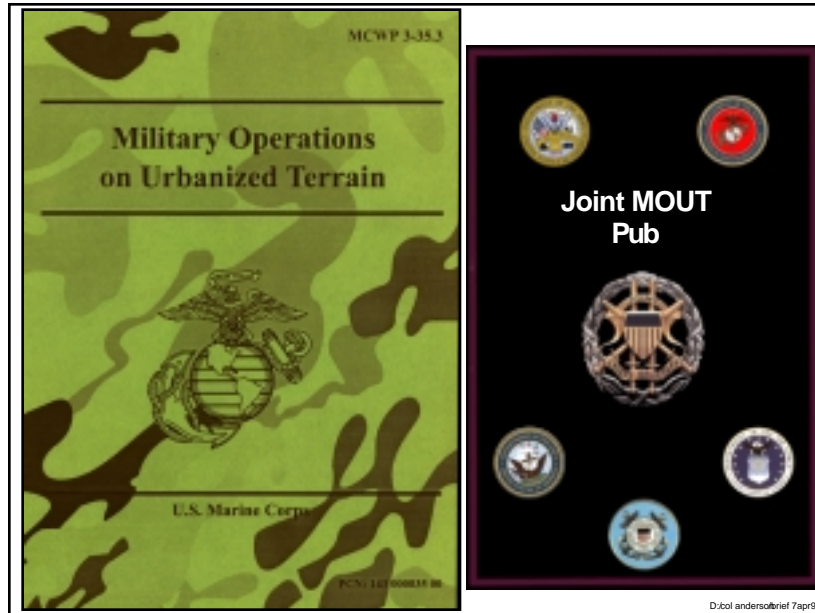


A Critical Question

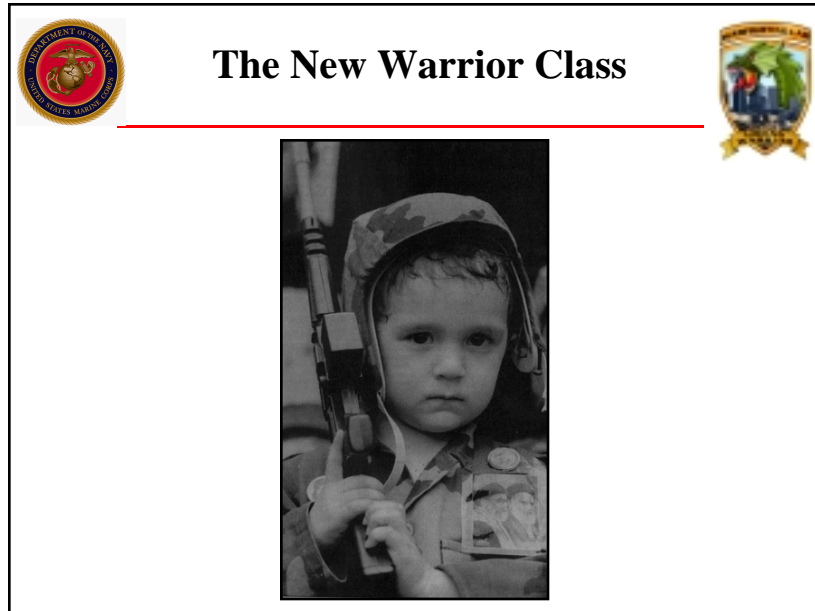


“How is it that a nation that could land an unmanned little go-cart on the surface of Mars couldn’t steer a convoy five blocks through the streets of Mogadishu?”

Mark Bowden
Blackhawk Down



MCWL used the current doctrine on the left as the baseline. We hope to contribute our lessons learned to emerging joint doctrine on the right.



The enemy of the future (Hezbollah youth) will be:

- 25 in the year 2020
- Innovative and skilled in urban combat
- None have been captured alive in seven years
- Kill rate for the Israelis is 10:1 in his favor
- He has cousins ranging from Africa's Gold Coast to East Timor



It is important to understand the environment and the culture.

		
<h3>DRAGON DRONE</h3> <ul style="list-style-type: none">• Dragon Drone is a Close Range Tactical UAV that has become the tactical UAV testbed for the Marine Corps. It is currently deployed with the 15th MEU in order to test its ability to extend the area of influence of a modest forward afloat expeditionary force.• Primary mission is reconnaissance, surveillance, and target acquisition.• Is also utilized as a payload development vehicle.	<h3>FY99 Operations</h3> <ul style="list-style-type: none">• Complete 15th MEU deployment in Dec 98.• LSD-44 shipboard installation by Dec 98 for 26 MEU.• 26 MEU deployment - Apr 99.• Continued payload development for future incorporation into Dragon Warrior.	

Dragon Drone is a first-generation short-range UAV. It allows us to see down the block and around the corner. It is a surrogate for more advanced systems, but it has been so popular that we are actually deploying it aboard our MEUs afloat until Dragon Warrior comes on line.


Surveillance and Reconnaissance Ground Equipment (SARGE)

Surveillance / Reconnaissance

- BSTF (Battle Shaping Task Force)
 - Norfolk, Summer 1998
- LOE3 (UW)
 - Camp Lejeune, Summer 1998
 - Free Play, MOUT Facility
- LOE3 (CW)
 - Virginia, Nov 1998
 - RSTA (1)
 - RSTA (2) 4th LAR



Another example of technology that can help



Combat Decision Range





- Extremely successful training capability
- No hard data on performance improvement, but universally hailed by commanders and trainees as a desirable product


- Train NCOs in combat decision making and leadership
- For use by every infantry regiment in the Marine Corps
- Operational March 1999
- Three-man mobile demonstration team
- Computer-based training system
- Uses seven major conflict/combat scenarios
- "Trains the trainers"
- Three days of instruction

A program to train squad leaders.


							
Motorola TalkAbout	Kenwood Freetalk	Ericsson FRS	Ericsson KPC	Vertex Vx-10	Iridium	Racal MSHR	ICOM IC-F48/F35

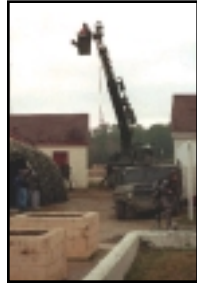
<p>Intra Squad Radio</p> <p>The ISR is the means by which the squad leader controls the action of his squad and communicates with higher headquarters. The radio must provide for commercial grade secure voice. It must function effectively within an urban environment and have an objective range of 3 miles. It should weigh no more than 8 ounces and be operable while wearing standard NBC or cold weather garments.</p>	<p>POA&M</p> <table border="0"> <tr> <td>Oct 98–Jan 99</td> <td>Limited technical assessments</td> </tr> <tr> <td>Feb–Mar 99</td> <td>Technology evaluation & report write ups.</td> </tr> <tr> <td>Apr 99</td> <td>Viable technology selected.</td> </tr> <tr> <td>May–Sep 99</td> <td>ISR rapid acquisition</td> </tr> <tr> <td>Oct–Dec 99</td> <td>ISR fielding</td> </tr> </table>	Oct 98–Jan 99	Limited technical assessments	Feb–Mar 99	Technology evaluation & report write ups.	Apr 99	Viable technology selected.	May–Sep 99	ISR rapid acquisition	Oct–Dec 99	ISR fielding
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Oct–Dec 99	ISR fielding										

- Technology at work.
- We are working to provide better communications and situational awareness to the individual soldiers and marines.
- We are looking into the possibility of getting commercial off-the-shelf radios and GPS down to the squad level, perhaps even to the individual marine, in the near term.
- We are also looking at getting a common, tactical, over-the-horizon picture that will include icons that actually interact. This has the potential to decrease the number of personnel who are currently often engaged in mundane staff activities such as posting unit locations.
- Other solution sets—nonlethals.
- Perhaps the biggest winner.



Boom Gun








- Proved to be a very good idea
- Technology used was not sufficiently developed to ensure adequate reliability
- Requires more work on tactical employment to fully assess

- Crane that has remote control .50 caliber machine gun (with camera) at end of boom
- Uses same weapon mount as Mobile Counter Fire System
- Used for situation awareness and force protection

Technology capability that can be useful in an urban environment.




Force Protection Clothing





- Urban camouflage pattern proved to be very successful
- Improvements are indicated for protective accessories in order to enhance wearability

- Experimental Urban Camouflage Uniforms
- Reversible Urban Uniforms
- Thermal Thellie Suits
- Improved ability for marines to avoid detection on the urban battlefield
- Improved load bearing capability
- Improved ballistic protection for individuals



Portable Reverse Osmosis Water Purification System (PROWPU)





- Man portable system
- Capable of supporting 42-man infantry platoon (250 gallons)

- Capability judged to be a promising idea for the support of isolated small units
- Portability requires improvement if intended as a man-packed item—too heavy!

This is deployed with MEUs today.



MV-22 Compatible Tactical Vehicle






- Assault variant provides a promising solution to the helicopter-transportable vehicle requirement
- Met all mission requirements during AWE
- Logistics variant not used due to its size (not internally transportable)
- Requires additional experimentation to provide valid assessment of tactical utility

- Internal and external MV-22 compatible
- Highly agile, extremely stable on all terrain
- Can carry 3000-lb payload (four personnel and equipment)
- 2 variants:
 - Light Strike Vehicle
 - Light Tactical Vehicle

Another winner. This may not be the vehicle chosen, but we like the capabilities.



Multi-lingual Interview System





- Hands-free operation using voice-recognition
- Resulting native-language speech can direct action or obtain a "yes or no" response

- Technical success during AWE both as a means to deal tactically with local populace and for enhancing medical care to foreign language speakers
- User interface aspects like the audio output and controls require refinement



Aviation LTA



9 – 16 June 99




Yodaville

- Laser Guided Training Round
- Maverick K EO PGM
- Inert TOW
- Rapid Targeting System
- Tactical Airborne Target Acquisition System (H-1 surrogate)
- CUTLASS Lethal UAV (H-1 surrogate)
- Dragon Fire 120mm Mortar
- Dragon Drone UAV
- Pioneer UAV
- K-Max Helicopter
- LADAR (Laser Radar)

In March 1999, the MCWL conducted Urban Warrior. The primary focus was on C4ISR and ground/logistics elements.


In June 1999, the MCWL will conduct an Aviation Limited Technical Assessment at Marine Aviation Weapons Training Squadron-1 in Yuma, Arizona.













Aviators training in the urban environment is critical. Yodaville provides an urban training environment for aviators conducting close air support missions. The next step will be to integrate this range with ground combat forces.



MCWL: Quo Vadis?

X-Files



<p>X-File 3-35.1</p> <p>Urban Attacks</p>  <p>Military Operations on Urbanized Terrain (MOUT)</p> <p>USMC Warfighting Lab U.S. Marine Corps</p>	<p>X-File 3-35.2</p> <p>Combat Squad Leader</p>  <p>Military Operations on Urbanized Terrain (MOUT)</p> <p>USMC Warfighting Lab U.S. Marine Corps</p>	<p>X-File 3-35.3</p> <p>Battle Captain</p>  <p>Military Operations on Urbanized Terrain (MOUT)</p> <p>USMC Warfighting Lab U.S. Marine Corps</p>	<p>X-File 3-35.5</p> <p>Urban Defense</p>  <p>Military Operations on Urbanized Terrain (MOUT)</p> <p>USMC Warfighting Lab U.S. Marine Corps</p>	<p>X-File 3-35.6</p> <p>Urban Patrolling</p>  <p>Military Operations on Urbanized Terrain (MOUT)</p> <p>USMC Warfighting Lab U.S. Marine Corps</p>	<p>X-File 3-35.7</p> <p>Security Operations</p>  <p>Military Operations on Urbanized Terrain (MOUT)</p> <p>USMC Warfighting Lab U.S. Marine Corps</p>
<p>X-File 3-35.8</p> <p>Combined Arms</p>  <p>Military Operations on Urbanized Terrain (MOUT)</p> <p>USMC Warfighting Lab U.S. Marine Corps</p>	<p>X-File 3-35.9</p> <p>Battalion and Below Communications</p>  <p>Military Operations on Urbanized Terrain (MOUT)</p> <p>USMC Warfighting Lab U.S. Marine Corps</p>	<p>X-File 3-35.10</p> <p>Directed Energy Weapons</p>  <p>Military Operations on Urbanized Terrain (MOUT)</p> <p>USMC Warfighting Lab U.S. Marine Corps</p>	<p>X-File 3-35.11</p> <p>Humanitarian and Disaster Relief</p>  <p>Military Operations on Urbanized Terrain (MOUT)</p> <p>USMC Warfighting Lab U.S. Marine Corps</p>	<p>X-File 3-35.12</p> <p>Urban Sustainment</p>  <p>Military Operations on Urbanized Terrain (MOUT)</p> <p>USMC Warfighting Lab U.S. Marine Corps</p>	<p>X-File 3-35.13</p> <p>Tactical Instrumentation</p>  <p>Military Operations on Urbanized Terrain (MOUT)</p> <p>USMC Warfighting Lab U.S. Marine Corps</p>

MCWL synthesizes information derived from experiments and quickly gets it out to the operating forces for use and feedback. These publications, while not doctrine, are used as training enhancements for the operating force. Much of this material will go into or become Marine Corps doctrine as appropriate.