Wargaming
Future Urban Combat

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Wargaming Future Urban Combat

Outline

• Wargame Theory
• How We Fight
• Urban Battle
• Notable Wargames

How should the Marine Corps organize, train, and equip to fight and win in future operating environments – in urban terrain?
Wargame Theory

What determines combat outcomes?

- Relative Combat Power
- Tactics & Terrain
- Technological Advantage
- Cohesion & Training
- Leadership & Decision Making
- Chance or Providence

Wargaming Variables: Multi-Domain Battle in an Urban Environment
Emerging technologies and threats require a deeper assessment of Marine Corps tactical capabilities to inform future force development.
How We Fight

Threat Forces based on COTS and Arms Exports

How will future threat forces be equipped?

Emerging Technologies:
- Unmanned Systems
- Autonomous Vehicles
- Advanced Robotics
- Swarm Intelligence
- Cyber Warfare
- Electronic Attack
- Active Protection
- Enhanced Sensors
- 3D Printing
Urban Battle

Physical Terrain

“Hollow space maneuver”

SOURCE: ATTP 3-06.11; FM 3-06.11.

RAND RR1602-3.2
Urban Battle
Human Terrain

Baghdad Ethnic Breakdown in 2003

- Population Density
- Neighborhoods
- Ethnicity
- Race
- Age
- Daily Movements
- Religion
- Political Affiliations
- Political Activities
- Economics
- Clan/Tribal Affiliations
- Criminal Organizations
- Class Divisions


RAND: RR1602-3.3
Urban Battle

The City as a System

The City as a System

CONFLICT prompted by:
- Absent Government
- Political Instability
- Unemployment
- Urban Poverty
- Crime

Rural Hinterland

Offshore (International)

Urban Coastal Core

Peri-Urban Space

URBANIZATION driven by:
- Environmental Degradation
- Poor Rural Infrastructure
- Lack of Access to Energy
- Poverty, hunger, disease
- Rural Crime and conflict

Physical Economic Governmental

Emigration

Diaspora

Shipping Offshore Extractives Trade Smuggling Piracy

ILlicit activity

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Goal: Dominate and neutralize the threat – in all domains – to establish security.

Domains:
- Land
- Air
- Maritime
- Space

Information Environment:
- Cyberspace
- Electromagnetic Spectrum
Urban Battle

Lessons from Mosul

- Armed Airborne ISR is the King of the Urban Battlefield
- The Combined Arms Micro Team: ISR, Tank, Squad, Sniper, Bulldozer, ATGM
- Mission Command

- VBIED and the Quadcopter Team
- Targeting the Enemy System
- Every move a Breaching Operation

Source:
“Immediate Lessons from the Battle of Mosul”
Small Wars Journal, SWJ Editors, 26 Jun 2017
http://smallwarsjournal.com/blog/immediate-lessons-from-the-battle-of-mosul
Notable Simulation Solutions

MCTOG’s Current Simulation Federation

**MAGTF Tactical Warfare Simulator (MTWS)**

- Ship to Shore Movements
- Unit Movements / Engagements
- Blue Cell, Red Cell, Green Cell, White Cell

**Joint Conflict and Tactical Simulation (JCATS)**

- Simulated Logistical Support
- Simulated Casualty Evacuation

**Joint Deployment Logistics’ Model (JDLM)**

- Simulated Intelligence, Surveillance, and Reconnaissance
- Unmanned Aerial Systems Provide Simulated Video Downlink

**Virtual Battlespace 3 (VBS3)**

- Notable Simulation Solutions

*Version dated 29 Jun 2017*
Notable Simulation Solutions

Enhanced Company Operations (ECOSIM)
Notable Simulation Solutions
Division Exercise Training and Review System (DXTRS)
Notable Commercial Wargames

Battle Academy 2
Notable Commercial Wargames

Flashpoint Campaigns: Red Storm
MCTOG’s Custom Tabletop Wargame

Air Assault 2030 Scenario
Wargame Requirements

- Urban Infrastructure and Terrain
- Marine Corps Equipment and Organization (MAGTF)
- Threat Equipment and Organization (Conventional and Hybrid)
- Unmanned Systems (Air, Ground, Water)
- Direct and Indirect Fire Weapons Systems (Realistic Adjudications)
- Naval Capabilities (Amphibs, DDGs, LCS, LCACs, LCUs)
- Ship to Shore Movement (Embark Capacity, Movement Profile)
- ISR Capabilities (Sensors, Flight Profiles)
- Electro-Magnetic Spectrum (Radars, Radios, Electronic Attack, SIGINT)
- Communications Transmission Posture (Signature Management)
- Logistics (Ammo, Water, Fuel Expenditure and Resupply)
- Engineer Activity (Obstacles, Fortifications, Breaching)
- Casualty Tracking
- Population Activity (Suffer Collateral Damage, Influence, Factions)
- IED Networks and C-IED Capabilities (Route Reconnaissance & Clearance)