

The Joint Operational Environment *... Into The Future*

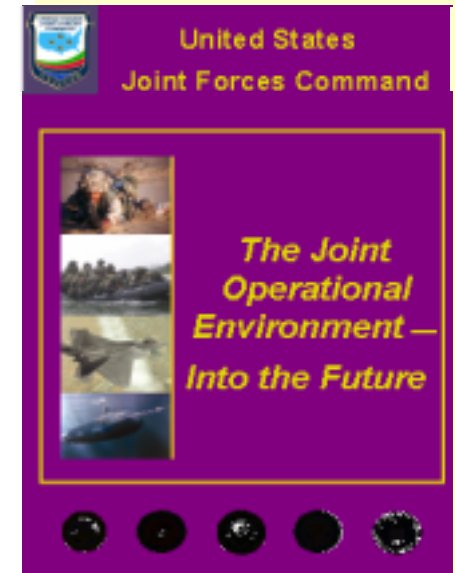


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The Joint Operational Environment (JOE)

born out of work on the COE - developed in partnership with Joint and Interagency Community ...

- Identifies strategic trends and highlights friction points; frames how future adversaries – state and non-state - will approach conflict with the United States.
- Defines context in conditions and factors that inform the use of force - today and into the future.
- Provides rigor and relevance for development of Joint/Army Concepts and Doctrine.
- Shapes scenarios for Joint/Service War-games.
- Serves as common point of departure for Joint experimentation.
- Benchmarks the development of Joint War-fighting Capabilities, when applied in a “Red Teaming” methodology.
- Living document – resides on the web.
- Continuously reshaped through ongoing study and analysis.



On the Horizon

We see

**Collapsing and Failed States
Revolution/ Civil War
Strained Ethnic/Cultural Relations
Trans-national Terrorists
A “Warrior” Ethic
Non-State Belligerents
Nation States with Less Control
Urban Warfare Virtually Assured
Niche Technical Parity**

Over the Horizon

We expect

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DEMOGRAPHIC
population growth, refugees,
urbanization, have/have nots

ECONOMIC
resource competition,
transparent borders,
globalization

TECHNOLOGY
rate of change, proliferation

**F
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***... a wider spectrum of challenges, increased unpredictability,
and a more complex range of operating environments.***

The “Four Challenges”

TRADITIONAL

Largely represented by states employing legacy and advanced elements of power and recognizable military forces, in long-established, well-known forms of competition and conflict.

IRREGULAR

Unconventional methods adopted and employed by non-state and state actors to counter stronger state opponents

*NEAR SIMULTANEITY
– TIME & LOCATION*

CATASTROPHIC

The surreptitious acquisition, possession, and possible terrorist or rogue employment of WME or methods producing WME-like results

DISRUPTIVE

Those that emanate from competitors developing, possessing, and employing breakthrough capabilities intended to supplant an opponent’s advantages.

Demanding variables in all Environments

- **Physical Environment** Urban and other complex terrain
- **Nature of the State** Failed states, autocratic rule
- **Society and Culture** Disenchanted Populations – Cultures in stress
- **Regional/Global Relationships** International Interest--Regional Involvement
- **Military Capabilities** Full range--Insurgents to Industrial Age forces
- **Technology** Discrete high--tech systems/Hybridization
- **Information** Media/Information Operations critical
- **External Organizations** NGOs/IOs/Criminal/Supra-National
- **National Will** Especially key to the U.S.
- **Time** **Plays to adversary's advantage**
- **Economics** Support intended level of operations

The future battlefield -

- High likelihood of close combat in urban environments and/or complex terrain
- Humanitarian issues present across the full spectrum of conflict
- Governmental, Private, International, Criminal and Non-Governmental Organizations increased presence and influence
- Ubiquitous presence of media
- Increased Global and Regional interest in local matters (Alliances and Coalitions)
- Advanced Technology present or available . . .
. . . and a changing Military Dynamic

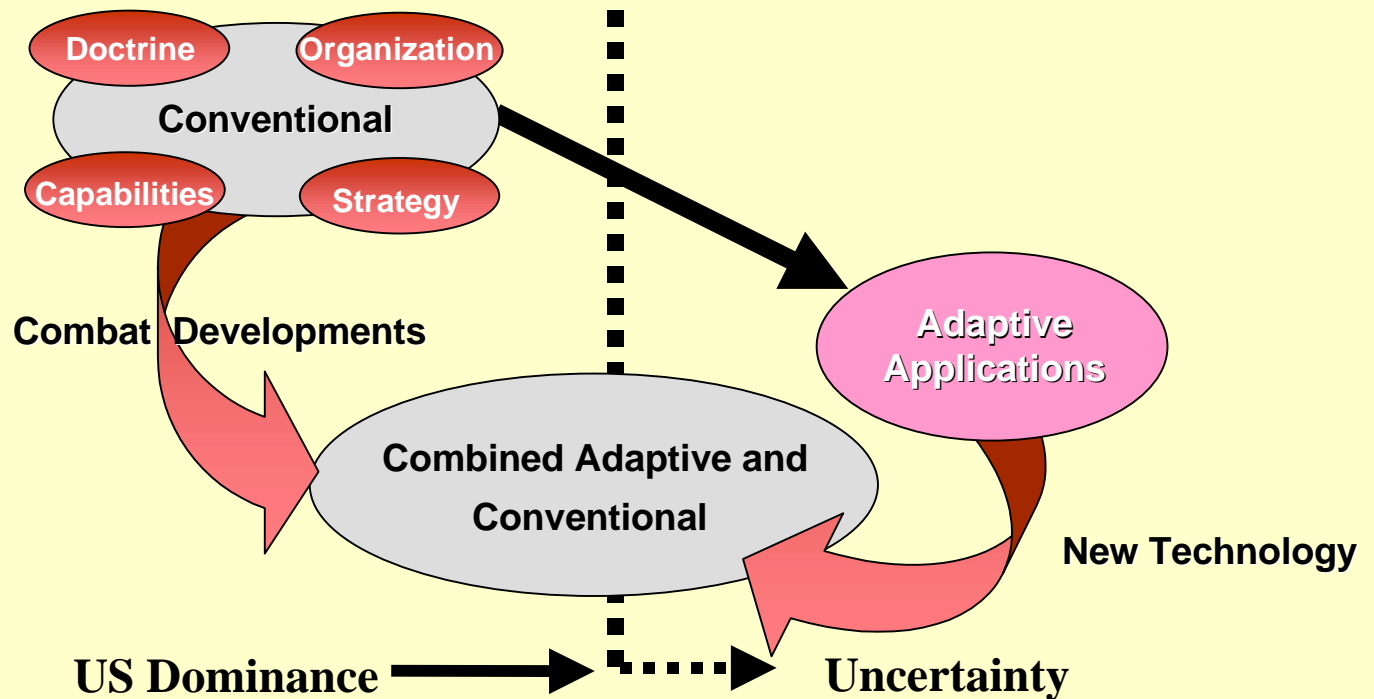


A Changing Threat

Military Forces are constructed in accordance with established paradigms - sufficient to meet national needs in regional settings against neighboring states.

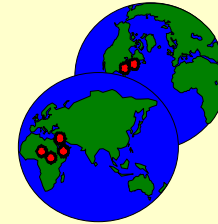
U.S. forces, with their technological, organizational and strategic capabilities, dominate conventional, regionally focused militaries.

This will drive US Adversaries to unconventional (adaptive) ways, means and ends that allow them to challenge the U.S.



A New Dynamic

.. Transnational organizations
engaging in conflicts that have international interest, strategic consequences, and involve extra-regional actors



Angered and Enabled by Globalization

Employing

Exploiting all facets of modern business, social, information,

Protective Asymmetry

- Protected by a coalition of sympathetic states, organizations and individuals
- Exceptionally complex terrain
- Asymmetric force structure – trained and organized as paramilitary and criminal cells, used in conjunction with conventional forces
- Employ media to gain informational advantage

and political structure



Applying these Concepts

Strategic attack on national will, public institutions and national strategy, systemology attack, and controlling the tempo - - focused on attacking political, military, and economic targets of symbolic value and long-term impact.

Offensive Capabilities

- Retains initiative through asynchronous execution of campaign
- Recruits, motivates, leads through ideology / religion
- Draws support and manning internationally
- Strategic purpose and campaign qualities allow adaptive methods and structure fitted to targets
- Cellular organization complicates detection

International organizations with a common enemy, but not a common purpose

What We Can Expect ...

Lethal Direct Fires

ATGM with 12-15km Range
140-152 mm Main Gun Tube
Defeats 900+mm RHA
Improved Fire Controls
Lethal Shoulder Fired Weapons
Ship to Ship missiles
Thermobarics
Electromagnetic Guns



Protection

Reactive Armor, 1.4M RHA
APS- 360° Top Protected
Low Observable Technology
Obscurants
Improved Mine Protection
Improved C3D2



Lethal AMD

Capable Against
Fixed/Rotary Wing
Ballistic Missiles,
Cruise Missiles,
and PGM



Mobility/Counter mobility

Self-Healing Minefields
EMP Mines
Dynamic Minefields
Complex and Urban Terrain
Enhanced Laser Mine Detection



Lethal Indirect Fire

Sea launched cruise missiles
Cruise Missiles to 3000km
Tube Artillery to 60km
SSM to 1000km
MRL to 150km
Improved PGMs



C4ISR/Counter C4ISR

Multiplexing/MMW Communications
Focus Analysis & Eyes On UAVs
EOCM Blinders, Dazzlers, DEW
Enhanced C3D2
Electronic Attack - GPS, PGMs
Direct Action - SPF, Strike/Fires

Counter-precision...

Air, Space, UAV
Unattended Sensors
GPS Jammers
HPM Munitions



Air to Surface Missile



IMPLICATIONS

DOCTRINE – Not dogma, account for need to work across ROMO,
enable quick turns

ORGANIZATION – Modular, tailorable and scalable

TRAINING – Career long process, build greater capacity early,
anticipatory

LEADER DEVELOPMENT – Better cognitive tools, more complex tasks
early, mental agility ; ready for full range of ops – MCO thru
Stab Ops, broader education

MATERIEL – Leverage advances in nano, bio, info tech; lab to field
faster, more COTS

PERSONNEL – Brighter, stronger, technically and culturally adept

FACILITIES – Support training AND operations – projection and reach

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