Army Strike Concept and Lessons Learned in Employing Precision Munitions

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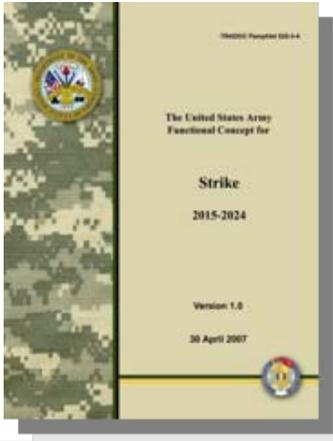**U. S. Army Field Artillery Center, Fort Sill, OK**

Agenda

- Overview of Army's Strike Concept

- Some lessons learned in using Field Artillery precision munitions in current combat operations

What is "Strike"

"Strike consists of the employment of future Modular Force fires, including available joint and multi-national fires, in support of full spectrum operations and the integration of fires with information capabilities and operations such as Command and Control Warfare, Information Engagement, and military deception operations."

TRADOC Pam 525-3-4

Taking Fires to the Next Level

TODAY

- Synergy of lethal and non-lethal fires in its infancy

- Emerging capability to engage targets in urban/COIN environments

- Multiple challenges in coordinating in a JIIM environment

2015-2024

- Fully nested application of Strike at all levels—horizontal and vertical

- Fires and Information "synergy"

- Dramatically improved responsiveness, effectiveness and efficiency

- Enhanced complementary and reinforcing effects

ARMY CENTRIC   JOINT RESPONSE   GURANTEED RESPONSE WITH BEST EFFECTS

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Key Conceptual Ideas

Provide continuous integration and employment of networked Strike from strategic to tactical levels

Provide seamless integration of lethal and nonlethal fires

Guarantee responsiveness and scaled lethality through Joint interdependence

STRIKE

Maintain routine access to space capabilities

Attack all target types in all environments and terrains with dramatically improved capabilities

Networked Strike

Key Idea:

Provide continuous integration of networked Strike from strategic to tactical levels

Fully automated sensor fusion

Network imbedded precision target location capability

Cooperative and responsive target engagement

Required Enablers
- Network that supports collaborative and dynamic planning and employment across all levels of command
- Continuous access to the Common Operational Picture (COP)
- Seamless and transparent communications and computer interfaces
- Routine employment of available joint and multinational fires

Result:

Fully nested application of Strike at all levels to achieve a common purpose

Pervasive situational awareness

Real time integration of fires with BSOs

Routine tracking and classification of friendly, enemy and neutral personnel and BSOs

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Lethal and Nonlethal

Advanced antipersonnel, anti-materiel, and terrain denial capabilities

Mix lethal and nonlethal capabilities based on possible consequences

Influence civilian populations and world opinion

Key Idea:

Provide seamless integration of lethal and nonlethal fires

Result:

Synergy resulting from the integration of fires and information

Required Enablers

- Synergistic integration of fires with information capabilities and operations

- Expansion of nonlethal means and capabilities

Standardized effects generation tools

Alter munition effects from lethal to non-lethal after firing / launch

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Enhanced Capabilities

Key Idea:

Attack all target types in all environments and terrains with unprecedented effectiveness

Balance lethality with collateral damage

Access sensors from strategic to tactical levels

Accurately locate and identify concealed or disguised objects

Required Enablers
- Employment of advanced munitions
- Near real time situational awareness
- Delivery of immediate and sustained precision fires

Real time, interactive munitions capable of scalable effects

Most advantageous mix of sensors and effectors

Systems that eliminate the consequences of response gaps

Result:

Exploitation of near real time situational awareness to dramatically enhanced responsiveness, effectiveness and efficiency

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Guarantee Responsiveness

Common procedures and control measures

Interoperable capability to spot, mark, tag, and designate targets

Reciprocal visibility and access to assets and capabilities
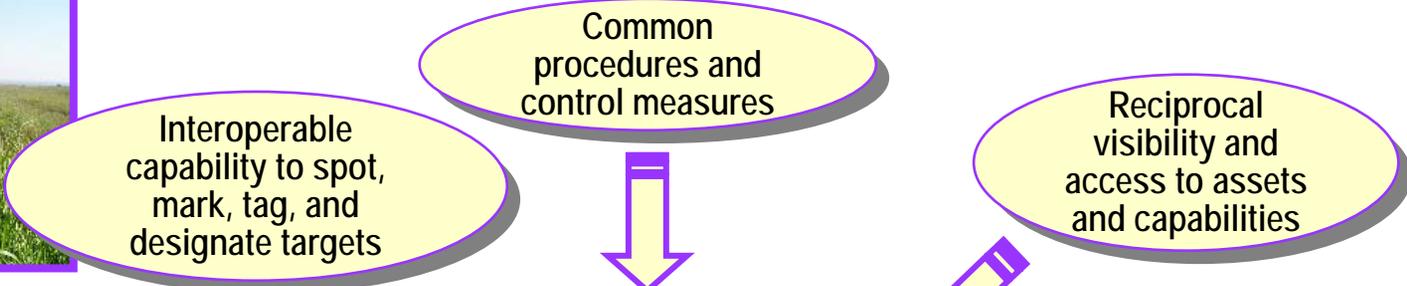
Key Idea:

Guarantee responsiveness and scaled lethality through Joint interdependence

Required Enablers

· Identification of the requirements for reciprocal joint support of lethal and nonlethal Strike

· A fully interoperable and seamless fires network at all levels

Result:

Enhanced complementary and reinforcing effects with reduced vulnerabilities

Common grid reference system

Standardized certification, education, and training

Common suite of joint decision-making tools
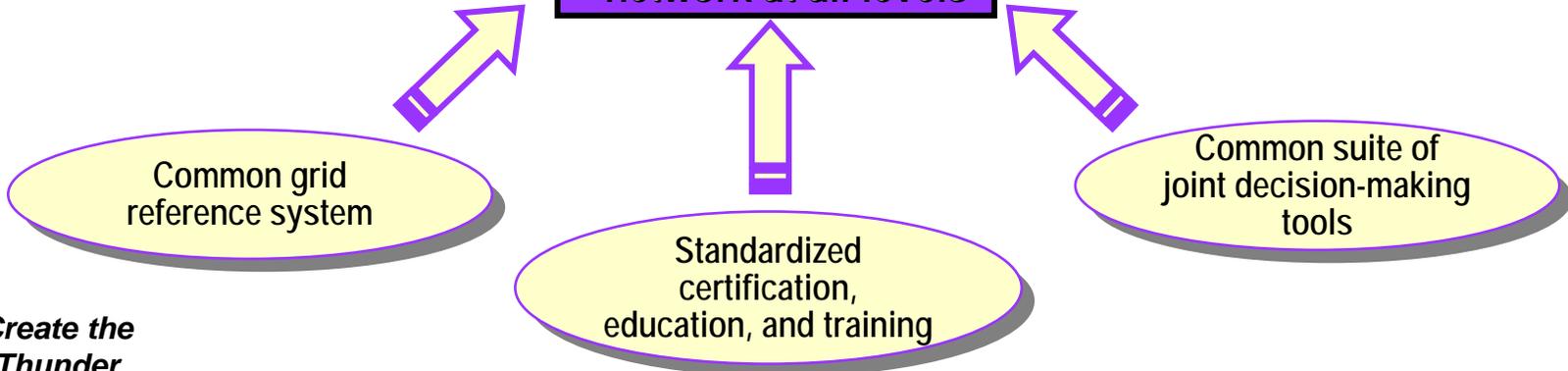
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Routine Access to Space

NOAA weather data

NSA products and data

National reconnaissance assets

Key Idea:

Result:

Required Enablers

- Incorporation of space related interagency capabilities

- "Operational responsive space" as the new model for space access

- Space capabilities throughout all levels of command

Maintain routine access to space capabilities

Commanders at all levels have near real time situational awareness, integrated fires, C2, and knowledge

Shared SA to individual level

Advanced missile warning

Precision guidance capabilities

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Summary

These key ideas   **With the required enablers**   **Will lead to . . .**

Provide continuous integration and employment of networked strike from strategic to tactical levels

Provide seamless integration of lethal and nonlethal fires

Attack all target types in all environments and terrains with unprecedented effectiveness

Guarantee responsiveness and scaled lethality through Joint interdependence

Maintain routine access to space capabilities

ENABLERS
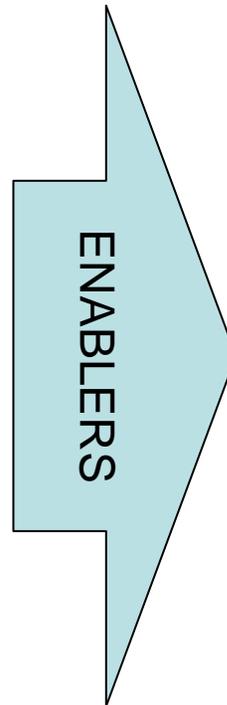
- Fully nested application of Strike at all levels
- Synergistic integration of fires and information
- Dramatically improved responsiveness, effectiveness and efficiency
- Near real time situational awareness, integrated fires C2, and knowledge
- Enhanced complementary and reinforcing effects
- Reduced vulnerabilities

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Lessons Learned

- Need direct and indirect capabilities for precision targeting at BCT level and below

    - Excalibur LUT proves we have direct capability that meets the need

    - PSS-SOF is great but has limitations that constrain its full utility

    - Scene matching will take PSS-SOF to another level for more dynamic targeting

- Precision in altitude is just as important as the other dimensions of target location

- Excalibur Ballistic Impact Points (BIPs) should be based on the AFATDS solution initially, then refined based on imagery and then selected based on observer final refinements.

- Troops in Contact missions have generally been more responsive than preplanned missions

- GMLRS-Unitary has broken a dated paradigm on use of rockets in close support

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Lessons Learned

- Having munitions that render themselves inert is great but needs to be adjustable to the situation

- GPS situational awareness is critical to ensure units are aware when satellites are taken offline as well as satellites broadcasting unhealthy information

- Differences in the Earth Geoids Models used by targeting folks, our sensors, C2 systems, and weapons platforms will be a continuing challenge we must address

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Back Up Slides

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Expectations for Fires 2015-2024

- Future commanders will have teams of artillery, air defense artillery, IED, sensor, signal, and electronic and computer subject matter experts who can provide the required support for the complex strike network of the future.
  - This will include the capability to deliver point and loitering jammers and surveillance for both air and ground systems for targets.
- Exchanges of friendly complex strike networks against enemy complex strike networks will replace the current friendly/enemy exchanges of artillery fire.
- Systems will be incorporated into integrated strike networks to provide future commanders capabilities to habitually conduct offensive, defensive, and exploitation strike operations.

The end result will be synergistic combinations of systems, decision-makers, and capabilities that enable commanders to employ fires integrated with C2W, IE, and MILDEC operations with unprecedented responsiveness and precision.

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