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EFFECTS-BASED TARGETING AND OPERATIONAL ART IN THE 21ST CENTURY

by

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Major, USAF

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

Signature: _____

5 February 1999

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Captain J. R. FitzSimonds, USN
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This article addresses operational scenarios and time-space-force factors which the operational commander currently faces, or may face in the future, and develops a doctrinal template that will support the integration of EBT in operational planning and employment. Additionally, the proposed codification of this EBT template into joint doctrine ensures operational commanders have general guidance when employing EBT in operational art.

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PREFACE

The following paper deals with operational concepts for the integration of effects-based targeting (EBT) at the operational level of war. This paper is designed to provide a foundation for the operational commander and his staff, especially the J2, J3 and J5, for applying EBT in operational level planning and employment. While advanced technology has changed the face of EBT and the implications of advances in technology will be discussed, it is not the focus of this article. Therefore, specific information on capabilities of current weapons systems, intelligence, surveillance, and reconnaissance (ISR) techniques or operational plans has purposely been omitted to keep the discussion unclassified. Numerous unclassified sources are available that contain technical information which can provide a *reasonable* representation of current or future capabilities within the next decade.

INTRODUCTION

Network-Centric Warfare...Joint Vision 2010...Precision Engagement...Information Warfare...a veritable plethora of operational buzz-words for the 21st century. No one can argue in these days of force reduction, the purpling of the military, limited defense budgets and metamorphosing threats, that continuous reviews of operational concepts are essential for the U.S. to remain dominant in the new millennium. One concept which has re-emerged that has benefit for future operational planning is Effects-Based Targeting or EBT.

This paper addresses operational scenarios and time-space-force factors which the operational commander currently faces, or may face in the future, and develops a doctrinal template that will support the integration of EBT in operational planning and employment. Additionally, it proposes codification of this EBT template into joint doctrine to ensure operational commanders have general guidance when employing EBT in operational art.

First we must define EBT. Effects-based targeting can be defined as an action taken against an enemy system or infrastructure (target), which produces a desired result (effect). The action, as it relates to operational art, is often associated with a military activity directed against an enemy target or target set which supports the operational commander's intent. For EBT to have operational value, the result or effect of this action must directly relate to achieving the operational objective or the desired end state.

The concept of EBT is not new. It can be traced to institutions such as the Committee of Operations (COA) and the Air Corps Tactical School[1]. A good example of EBT occurred in World War II. Allied bombing of rail transportation in Germany was conducted to isolate the "OVERLORD" area to prevent German reinforcements from destroying the beachhead and

contributing to the breakthrough toward Paris[2]. This example highlights several important points regarding EBT.

First, to effectively employ EBT, the operational commander and his staff must have a clear understanding of the enemy system.

> *....the enemy system includes its political, military, social and economic structures. Viewing the system as a whole means not only knowing the locations, strengths, and weaknesses of individual elements but also understanding the interdependencies among those elements. In other words, the importance of a single entity lies in its relationship to other entities within the system.*[3]

To construct a model of an enemy's system and its interrelationships requires an intelligence collection and analysis apparatus which is designed with EBT in mind. Second, EBT could produce the desired effects immediately or over an extended period of time. This mandates that ISR capabilities support not only near real-time battle damage assessment (BDA) or as we will discuss later, battle damage indicators (BDI), but long term measures of effectiveness (MOE) as well. Finally, and most importantly, the operational commander and his staff must ensure that the effect will achieve, or at a minimum support, the operational objective.

Regressive planning models such as Glenn A. Kent's hierarchy of security objectives can provide a framework for enhancing operational capabilities using EBT[4]. Starting with the strategic objective, the basis for all subsequent planning, working the operational objective next, then identifying effects, and finally choosing appropriate targets, provides a sequential order for ensuring effective integration of EBT in operational art.

These points will be the cornerstone for our EBT template. Using current operational scenarios, they and several other considerations will be discussed to illustrate the template.

A TEMPLATE FOR EBT

Codifying a doctrinal template, which incorporates the use of EBT in operational planning, will ensure enhanced operations into the next century. We have defined *what* EBT is. To build a template for operational planning, we must now look at *when*, *where*, *why* and *how* to employ EBT.

WHEN?

The first guidance provided to the operational commander by the EBT template deals with the operational objective. Whether the operational objective has been directed from a higher level, or the operational commander has been afforded the opportunity to come up with his own, it is imperative that he ensure it directly supports the strategic objective. Next, two specific questions from Joint Pub 3-0 an operational commander must consider which have significant importance in EBT are:

> - *What military (or related political and social) conditions must be produced in the operational area to achieve the strategic goals? (Ends)*
> - *How should the resources of the joint force be applied to accomplish that sequence of actions? (Means)*[5]

This provides a starting point for regressive planning when employing EBT at the operational level of war. The factors of time, space and force will determine how EBT should be used to support operational art. EBT should always be employed when a desired effect can be achieved which will support or achieve the operational objective.

WHERE?

When it has been determined that there is an effect which will achieve or support the operational objective, the EBT template must direct the operational commander *where* to target. At the operational level this is not normally a tactical target (although it could be), but that *component* of the enemy system which will produce the desired effect. Colonel John Warden's five concentric ring model for center's of gravity is a good example of an enemy system.[6] It includes 'enemy command' as the center circle with 'essential production', 'transportation', 'population' and 'military forces' in outwardly expanding concentric circles respectively. As mentioned in the introduction, there are interdependencies between individual elements, which can be referred to as nodes, within each area of an enemy system. There are also relationships between the separate areas, or in Warden's model, the five rings, in the system. Often, synergistic effects can be obtained through EBT based on these interdependencies and relationships. For example, Warden's third ring is transportation. If a bridge over a river is determined to be on an enemy's expected route of attack or withdrawal, it becomes a critical node in that area. It has operational significance since it will affect his ability to maneuver. If the operational objective is to contain the enemy force, or cause him to maneuver in a certain direction to support the operational objective, targeting this node in his transportation system will produce the desired operational effect. This occurred during DESERT STORM on the Basra highway, allowing for the destruction of a good portion of the Iraqi military (an operational objective). In the above example, the target could have been several bridges, or perhaps a choke point in a mountain range. The important factor is not the tactical target, but the comprehensive knowledge of how the enemy functions as a system.

The concept an EBT template must emphasize is where to target operationally based upon the system and the effect desired, and not on tactical targets.

If the operational commander and his planning staff are to be successful in targeting an enemy system to produce operational effects,

> *[A]ll parties must understand desired and predicted effects in order to effectively analyze results. Additionally, intelligence systems and personnel need to be attuned to the implications and requirements of effects-based targeting with regard to targeting methodology and measuring success.* [7]

The operational commander's template for EBT must ensure a capability exists to determine and quantify MOEs in achieving the desired effect. As advances in information technology and network-centric warfare improve, our ability to more accurately build models of enemy systems, and collect and analyze information from ISR assets regarding BDA, BDI and other MOEs improve as well.

VADM Arthur K. Cebrowski's theory on network-centric warfare applies well to EBT:

> *Network-centric warfare enables a shift from attrition-style warfare to a much faster and more effective warfighting style characterized by new concepts of speed of command and synchronization. Forces acting with speed, precision and reach, achieve the massing of effects versus the massing of forces. The results that follow are the rapid foreclosure of enemy courses of action and the shock of closely coupled events. This disrupts the enemy's strategy and, it is hoped, stops something before it starts.* [8]

As EBT is integrated into operational art to greater degrees, it is essential that the operational commander and his planning staff ensure information is available to model an enemy system. This includes committing the time and resources necessary to obtain the information on an enemy system before, during, and after a course of action is undertaken. Follow-on operations and changes to operational plans, will be based on the knowledge of tactical

successes or failures. This will place a great deal of importance on ISR capabilities and advances in information technologies to provide credible intelligence data to intelligence analysts, engineers and operational planners.

Effects-based targeting places demands on the ability to measure success through less tangible and less obvious indicators of effectiveness.[9] In the early stages after an action has taken place, less measurable BDIs, which should already be identified, must be measured. In some areas we have little or no capability to assess the BDIs. One example could be targeting a generator in an electrical power facility. Precision guided munitions could conceivably enter the facility and explode inside, leaving no tangible evidence for BDA, however, the generator may have been destroyed. A BDI, on the other hand, might be the lack of a heat signature from that building the following day, identified from overhead infrared imagery. ISR assets will play a key role in assessing BDIs. Additionally, EBT will not always produce an immediate effect, but may produce the effect at a specified time in the future. Operational planners must be aware that:

> *...[A]ttacks late in the production cycle have a more immediate and direct effect on the military (operational effect). Attacking targets deeper in the economy have a broader and longer lasting strategic effect, but would require more time for the effects to be felt.*[10]

Thorough knowledge of the enemy system, not only helps operational planners determine where to target for a specific effect, but will also determine the duration of the effect. If the objective is to cut off transportation to a specific area of the battlefield, operational planners must decide how long the effect must continue to support the commander's intent and support the overall operational objective. This must be included in the EBT template.

The bottom line is that EBT requires a methodology be in place, based on the enemy's system, to address BDA, BDI, and MOEs based over a time continuum on a pre-determined, measurable set of indicators.

WHY?

Our EBT template has helped determine when and where EBT should be integrated into operational planning. The next question that must be considered is *why* EBT should be employed in operational planning.

Scenarios that operational commanders now face range from operations other than war (OOTW) to major theater warfare (MTW), to include the possible use of weapons of mass destruction (WMD). Military forces are tasked to operate in both "mature" and "immature" theaters. Force drawdowns and limited military funding require efficient operations. In this era of doing more with less, EBT can be an extremely valuable tool as a force multiplier across the board. As long as an operational objective can be achieved by some operationally significant effect, EBT is a viable tool. For instance, by using EBT to destroy a critical node or a small number of consequential nodes in an enemy system, an operational commander can cause desired, long term effects with minimal forces and equipment at reduced risk.

Current and future capabilities in precision engagement and weapon effects allow military forces to target specific nodes of an enemy system with fewer weapons, weapons delivery systems, personnel and provide a high probability of success. The capability that is derived from advanced technology, however, often comes with a hefty price tag. Current and future weapons systems, to include weapons, delivery systems, guidance systems, space-based

infrastructure and the ISR assets are costly, as is research and development to field new systems. Still, as we draw much of our force structure away from forward basing and reduce our force structure through base closures and realignment, this precision engagement capability allows us to deploy as an expeditionary force, on short notice, to face global threats in a variety of contingencies. From a force structure perspective, OOTW such as humanitarian, peace-keeping, peace-making and peace-enforcement missions have stretched our military thin. While dealing with these contingencies we must still be able to deter and defend against MTW anywhere in the world. Effects-based targeting, in concert with advanced technology, affords us a greater capability to meet operational objectives with a reduced force structure.

Effects-based targeting, when employed using precision weapons can provide *cleaner* effects by damaging less of the enemy infrastructure, important in post-hostility operations. Precision weapons, such as Tomahawk, allow for the targeting of very specific nodes in the system, while minimizing the potential for targeting *fouls* or collateral damage. EBT does not preclude the use of older technology such as unguided bombs to achieve the desired effect, affording the operational commander flexibility based on force structure, weapon inventories or budget constraints. EBT concepts should not, however, be used to justify force structure.

The take-away for the operational commander is that EBT should be used as a force multiplier, not replacement. The operational commander, when asking why EBT should be integrated into operational planning, should demonstrate that it will add value to the operational plan. This is accomplished by delaying the enemy's advance, deterring an enemy attack (operational factor - time), allowing him to deploy or maneuver friendly forces to or

across the battlefield (operational factor - space) or reduce the enemy's forces or capabilities giving friendly forces the decisive advantage (operational factor - force). It must however, be used in conjunction with well equipped and trained air, naval and ground forces. In the case of OOTW it can also be used to provide leverage for political negotiations.

HOW?

One of the most difficult problems faced by the operational commander when using EBT is linking the effect to successfully achieving a political objective. In most cases, there is no direct correlation.

In our EBT template for operational planning, we must look at *how* EBT can best be applied. Colonel John Warden suggests that operational objectives tend to fall into one of three categories. First is the destruction of some or all of the enemy's forces. Next is the destruction of some or all of the enemy's economy, especially that which is required by his war machine. Finally, is the destruction of the will of the people or the government to resist. This last objective is "tenuous" because it is often the result of some combination of the first two.[11] With these categories in mind, we can build a decision matrix concerning the use of EBT.

If the objective is to destroy some or all of the enemy's forces, the operational commander must determine what effect is desired and for what duration. Is it rendering an armor division ineffective? Is it destroying mobile targets? Is it eliminating his WMD? If so, what part of the enemy system might be targeted to produce this desired effect and achieve the objective? This is where operational planners must step back and break the targeting paradigm. They

must give the *effect* priority over that of the target. In the example above, to eliminate the enemy's WMD, habit might lead a targeting cell to destroy enemy warehouse facilities (assuming intelligence could provide the information). By examining the enemy system, there may be a critical node in the manufacturing process, the transportation system, or even the delivery system. If targeting the manufacturing process in this case achieved the desired effect with fewer resources, or creates a long-term operational effect, EBT should be applied. However, as mentioned earlier, the deeper in the system you target, the longer the effect may take to be realized and the more difficult it will be to measure effectiveness.

Effects-based targeting does not mandate the use of military force. Information warfare must now be considered as a method of targeting the enemy. Computer hackers and computer viruses have become a serious threat to today's business computers and computer networks. In the second category above, it is conceivable that information warfare could be employed against network CPUs to disrupt a specific portion of the enemy's economy. Such a disruption could conceivably effect his economy or military capabilities enough to achieve the operational, or perhaps even the strategic objective. Information warfare against command and control or integrated air defense systems is another good venue for EBT.

The third category above is the destruction of the will of the people or the government. Examples in history abound which should raise a red flag of caution when this becomes an operational objective. However, EBT does have some merit in this arena. Targeting with PSYOPS (such as the employment of leaflets) could produce effects which may influence the will of the government, the people or even military forces. Unfortunately, the MOEs could be very hard to determine, if not impossible. The operational commander must therefore

have specific effects in mind and have some method of determining how effective the targeting is, whether military, economic, social or political in achieving this particular operational objective.

From the operational factors of time, space and force, our EBT template must take into account *how* it can best be integrated in contingencies from crisis action planning to delay an enemy, to OOTW where it might be used to gain leverage for political negotiations, or MTW where long-term operational effects are desired. Operational planners must step back in each of these contingencies and, through regressive planning, look at the stated strategic objective and ensure that the chosen operational objective will achieve it. Planners must then determine if there is some operational effect that will support the operational objective in each scenario. In crisis action planning, the primary objective may be to delay the enemy's course of action. If this can be accomplished by creating an effect, based on the destruction of a target in either a strategic, operational or tactical portion of the enemy's system, then the use of EBT is warranted. This principle can be applied to OOTW and MTW as well.

Operational commanders must also consider forces allocated for an operation, distance to the area of operations and the maturity of the theater. There are finite stocks of precision weapons such as Conventional Air Launched Cruise Missiles (CALCM) and Tomahawk Missiles. If we continue to use them in the quantities that were used in operation DESERT FOX, we will soon find ourselves left with less capable weapons and shorter standoff ranges. The maturity of the theater and knowledge of the enemy's system will also dictate the extent to which EBT can be applied. For example, building an accurate model of China's entire system would be work intensive, as well as time and cost prohibitive.

In review, how EBT is used will be determined by the type of operation, the desired operational objective, reaction time, forces available and the proximity and maturity of the theater.

Our doctrinal template for integrating EBT in operational art is nearly complete. We have discussed what, when, where, why, and how EBT can best be integrated into operational planning. We will now discuss a few other considerations for the operational commander regarding EBT.

OTHER CONSIDERATIONS FOR EBT

The operational commander must keep in mind several other considerations, in addition to what we have discussed above. In an era where Rules of Engagement (ROE) and the Laws of Armed Conflict (LOAC) often direct or negate courses of action, EBT may walk some fine lines. Theoretically, if a current operational objective is the overthrow of Saddam Hussein's regime in Iraq, and the effect we are looking for is to create significant social unrest by levying economic hardship on the people of Iraq, one approach could be to target nodes throughout the entire enemy system (i.e. electricity, transportation, food supplies, water supplies, etc.). Targeting some or all of these areas may be in violation of the LOAC. This is an extreme example, but is designed to emphasize a point . Operational commanders will have to work closely with the Staff Judge Advocate to ensure target legality, and may need to refine targets to stay within legal guidelines.

Another consideration is that of media coverage. This can work both for and against the commander. Precision engagement against specific nodes of an enemy system, as opposed to

large footprints of destructive bombing, minimizes collateral damage and civilian casualties, and subsequently what the media can use to lead the five o'clock news. This can work against him as well. Minimal, apparent damage in television news reports, even though producing the desired operational effect against a valid target, could give the public, the impression that attacks are unsuccessful. *Perceptions are reality*!

Live coverage, such as that of CNN during recent operation DESERT FOX, actually provided real-time BDA. For example, let's assume that one of the objectives during DESERT FOX was to take out the ability of Saddam Hussein to use commercial television to broadcast to the Iraqi people, and the effect was to terminate television transmissions by targeting a transmitter or transmission tower, the CNN crew reported that the television station had "just gone off the air" while reporting live. This provided instant BDA/BDI and a measure of effectiveness as well. Television pictures of bomb damage could also provide intelligence. Unfortunately, the enemy often allows the press to see only certain areas or damage which may not provide an accurate assessment of effectiveness. Media coverage can also effect public and international opinion. The operational commander must consider how the media might impact use of EBT .

Collateral damage was discussed above with regards to the media. It is also a serious consideration for today's operational planners. By employing EBT, especially with precision engagement weapons, the potential for collateral damage can be reduced. The ability to look for secondary or tertiary targets in an enemy system that can produce the same effects, but are away from population centers, is one possible way to reduce or eliminate collateral damage.

The use of information warfare or PSYOPS virtually eliminates the potential for physical and collateral damage.

Finally, our world has become more entwined economically, politically and socially. When using EBT, the commander must use caution for the operational ripple effects that can propagate not only in the enemy system, but to neighboring countries, theaters and potentially across the globe. The Asian economic crisis is a good example as its impact has had a ripple effect around the world. EBT could have the same undesirable effect if employed without critically assessing effects, based on a thorough knowledge of the enemy system and its relationship within the global system.

CONCLUSION

Effects-based targeting will provide significant added value to operational art. For seamless integration into operational planning and employment, a codified, doctrinal template (joint/combined) must be in place to provide guidance to operational commanders and staff, particularly intelligence, operations and plans (See Appendix A)

Effects-based targeting can be employed effectively only when there is a clear operational objective and some relevant, operational, attainable effect that can be identified which will support or achieve that objective. A limitation of EBT in this area is often our inability to relate operational effects to political objectives. A thorough knowledge of the enemy system and its interdependencies and relationships both within and without (global) must be thoroughly understood. This may require the operational commander to request support from other government agencies or strategic ISR assets to help build an accurate model of the enemy system. As EBT is more fully integrated into operational art, advanced technology

and concepts, such as network-centric warfare, will be more heavily relied upon to help build accurate models of enemy systems under greater time constraints.

Effects-based targeting is a force multiplier. It can be used across the full spectrum of contingencies. It affords the operational commander the ability to lower his risk by using fewer resources while reducing the probability of collateral damage. It can be used to deter, delay, contain or channel enemy forces to complement the overall operational scheme or as a tool for political leverage.

Effects-based targeting concepts employed will depend on the contingency, the operational objective, reaction time, forces allocated, distance to, and maturity of the theater. A methodology to determine and assess BDA, BDI and measures of effectiveness must be in place prior to employing EBT. Another limit of EBT is rooted in collection and analysis capabilities. To more fully realize the capabilities of EBT we must improve ISR and analysis techniques. Finally, operational commanders must consider LOAC, effects of media coverage, the impact of collateral damage and the possibility of operational ripple effects.

In a perfect world, all targeting would be effects-based. Through use of the doctrinal template, based on regressive planning, the operational commander will ensure that the operational objective will achieve the strategic objective. Next, an appropriate effect, and duration for the effect, will be identified to achieve the operational objective. Targeting in a portion of the enemy system will take place, designed to produce the desired effect. A methodology will be proposed to list indicators and provide a framework for BDA, BDI, MOEs, ISR collection, and analysis. Finally, other areas such as LOAC, media coverage and effect ripple will be considered. A codified EBT template, based on the operational

employment concepts above, will be the springboard for EBT in operational art for the 21st century.

Endnotes

[1] Wesley B. Hester, Deputy Commander, Joint Warfare Analysis Center. Telephone conversation on 26 January 1999.

[2] W.W. Rostow, Pre-invasion Bombing Strategy: General Eisenhower's Decision of March 25, 1944 (Austin: University of Texas Press, 1981), 74.

[3] Donna Lucchese, "The Relationship of Center of Gravity Analysis, Targeting for Effect, and Measuring Success." (Unpublished Research Paper, U.S. Army War College, Carlisle Barracks, PA: 1998), 4.

[4] Glenn A. Kent and William E. Simons, A Framework for Enhancing Operational Capabilities (Santa Monica: Rand, 1991), 11.

[5] Joint Chiefs of Staff, Doctrine for Joint Operations (Joint Pub 3-0) (Washington, D.C.: February 1, 1995), II-2.

[6] John A. Warden, The Air Campaign (Washington: Pergamon-Brassey's, 1989), 65.

[7] Lucchese, 18.

[8] Arthur K. Cebrowski and John J. Garstka, "Network-Centric Warfare--Its Origin and Future," U.S. Naval Institute Proceedings, Vol. 124, No. 1/1, 139, 1998, 32.

[9] Lucchese, 18-19.

[10] Ibid., 9.

[11] Richard H. Shultz and Robert L. Pfaltzgraff, The Future of Air Power in the Aftermath of the Gulf War (Maxwell Air Force Base: Air University Press, 1992), 112-113.

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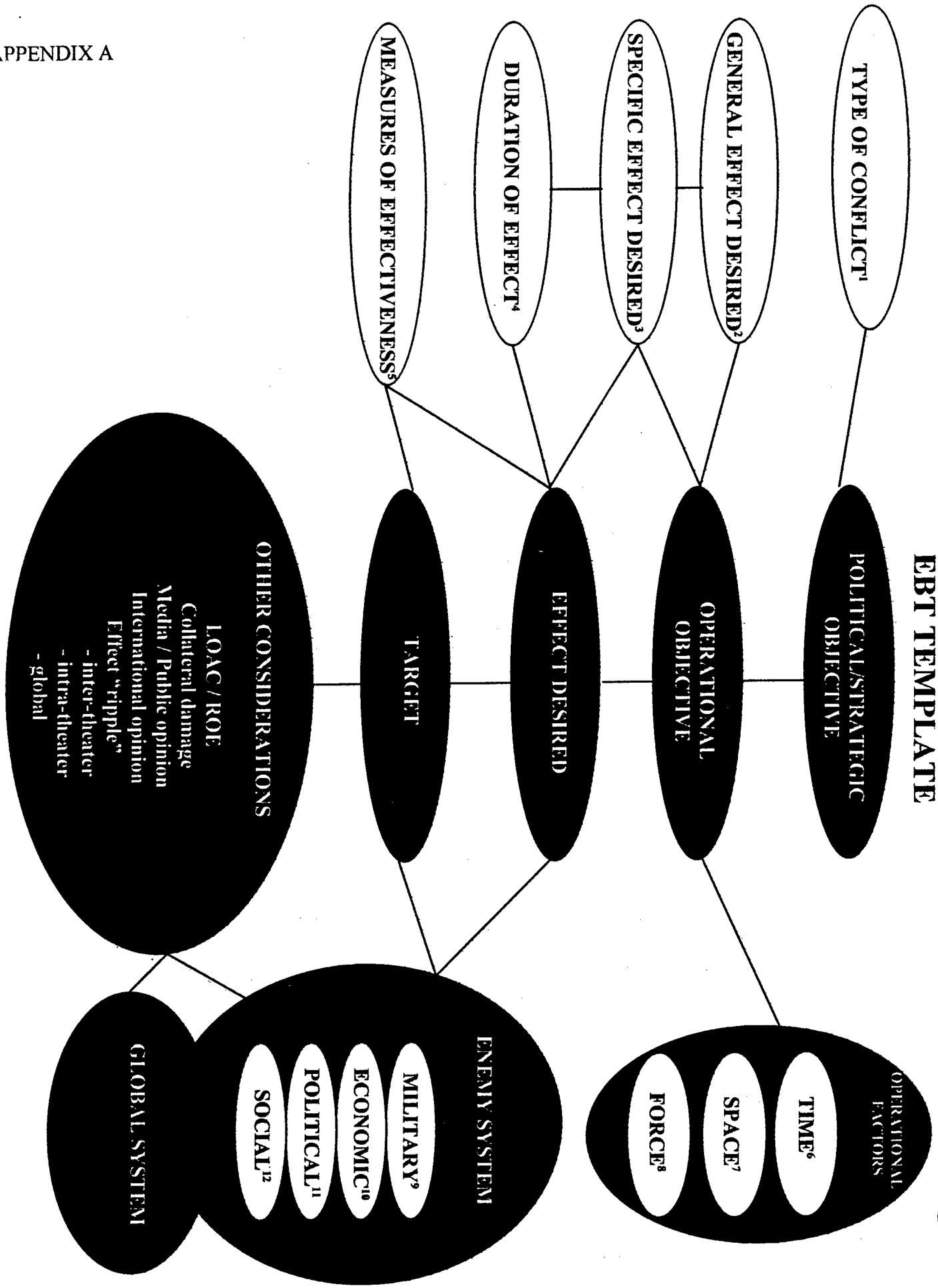
APPENDIX A


EBT TEMPLATE
TYPE OF CONFLICT[1]
GENERAL EFFECT DESIRED[2]
SPECIFIC EFFECT DESIRED[3]
DURATION OF EFFECT[4]
MEASURES OF EFFECTIVENESS[5]
POLITICAL/STRATEGIC OBJECTIVE
OPERATIONAL OBJECTIVE
EFFECT DESIRED
TARGET
OTHER CONSIDERATIONS
LOAC / ROE
Collateral damage
Media / Public opinion
International opinion
Effect "ripple"
- inter-theater
- intra-theater
- global
OPERATIONAL FACTORS
TIME[6]
SPACE[7]
FORCE[8]
ENEMY SYSTEM
MILITARY[9]
ECONOMIC[10]
POLITICAL[11]
SOCIAL[12]
GLOBAL SYSTEM

EBT TEMPLATE

WHAT?	EBT is an action taken against an enemy system which produces a desired result and supports the operational objective.
WHEN?	EBT should be employed when a desired effect can be identified which will support or attain the operational objective.
WHERE?	EBT should be employed against that portion of the enemy system (strategic, operational or tactical) which will most efficiently and effectively lead to the desired effect.
WHY?	EBT is a force multiplier which can be used over the full spectrum of conflict to deter, delay, contain or provide political leverage against an enemy.
HOW?	EBT is used by matching the operational objective to a desired effect. The effect desired will be based on the type of conflict, the objective, reaction time and duration the effect must last, forces available, the proximity to, and size and maturity of the theater of operations. A methodology must be in place to model the enemy system, collect and analyze ISR information and determine effectiveness based on BDA, BDI and measures of effectiveness over a time continuum based on pre-determined indicators and standards for success.

[1]Examples of types of conflict: Crisis, Operations Other Than War (OOTW), Major Theater Warfare (MTW), etc.
[2]Examples of general effects: deter, delay, defend, contain, disrupt, destroy, politically leverage, etc. These are general in nature and support the objective based on time space and force factors.
[3]Examples of specific effects: cause break down of C2 network for 2 hours, contain enemy north of 33rd parallel, cause 20% of enemy troops to desert, take down power grid for two weeks, etc. These are specific objectives which support or attain the objective. The more specific the better.
[4]Examples of duration of effect: long term, medium term, short term, immediate, 2 weeks, 4 hours, etc. For every effect desired, a duration for the effect should always be determined.
[5]Examples of measures of effectiveness: pre-determined indicators, standards of success, BDA, BDI, ISR capabilities, analysis capabilities and techniques, etc. Commander must insure that ISR assets are available to measure effectiveness. Request for assistance from other government organizations or national ISR assets may be required.
[6]Examples of operational time factors: no-notice, critical action planning, pre-planned strike, protracted war, duration desired for effect, etc.
[7]Examples of operational space factors: proximity to the theater, size and maturity of the theater, stand-off weapon ranges, etc.
[8]Examples of operational force factors: size of force, training of force, joint/combined, precision weapons availability, etc.
[9]Examples of military effects desired and targets: terminate C2 capability for 4 hours - communications bunker, contain troops north of 33rd parallel - critical bridge, etc.
[10]Examples of economic effects desired and targets: no funding for weapons procurement - freeze international bank accounts, etc.
[11]Examples of political effects desired and targets: change in leadership - people and media, etc.
[12]Examples of social effects desired and targets: terminate television transmission for 1 week - transmitter and tower, overthrow of the government - media (PSYOPS), starve population - transportation system, etc.