

73rd MORSS CD Cover Page

UNCLASSIFIED DISCLOSURE FORM CD Presentation

712CD

For office use only 41205

21-23 June 2005, at US Military Academy, West Point, NY

Please complete this form 712CD as your cover page to your electronic briefing submission to the MORSS CD. Do not fax to the MORS office.

Author Request (To be completed by applicant) - The following author(s) request authority to disclose the following presentation in the MORSS Final Report, for inclusion on the MORSS CD and/or posting on the MORS web site.

Name of Principal Author and all other author(s):

Lt Col David Denhard

Principal Author's Organization and address

**AFIT/ENS
2950 Hobson Way
Wright-Patterson AFB, OH 45433-7765**

Phone: (937) 255-3355 Ext 3325

Fax: (937) 656-4943

Email: david.denhard@afit.edu

Original title on 712 A/B: Assessing Effects-Based Operations

Revised title: _____

Presented in (input and Bold one): WG 17 & 24, CG____, Special Session ____, Poster, Demo, or Tutorial):

This presentation is believed to be:
UNCLASSIFIED AND APPROVED FOR PUBLIC RELEASE

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 22 JUN 2005	2. REPORT TYPE N/A	3. DATES COVERED -	
4. TITLE AND SUBTITLE Assessing Effects-Based Operations		5a. CONTRACT NUMBER	
		5b. GRANT NUMBER	
		5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)		5d. PROJECT NUMBER	
		5e. TASK NUMBER	
		5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) AFIT/ENS 2950 Hobson Way Wright-Patterson AFB, OH 45433-7765		8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)	
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited			
13. SUPPLEMENTARY NOTES See also ADM201946, Military Operations Research Society Symposium (73rd) Held in West Point, NY on 21-23 June 2005 . , The original document contains color images.			
14. ABSTRACT			
15. SUBJECT TERMS			
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified	
19a. NAME OF RESPONSIBLE PERSON			



Assessing Effects-Based Operations

Lt Col Dave "Doc" Denhard
Assistant Professor of Operations Research
Air Force Institute of Technology

Contact info:

David.Denhard@afit.edu

(937) 255-3355 X3325

The views expressed in this presentation are those of the author and do not reflect the official policy or position of the Air force, Department of Defense or the U.S. Government.



Motivation



- Spent 3 years at USCENTCOM doing campaign assessment for Operations ENDURING FREEDOM and IRAQI FREEDOM
 - Learned a lot about what works and what doesn't in the field
 - Day job has given me more time to study & critically think about the assessment problem
- Concerned that the assessment community is spending too much time and \$ on “tools” and not enough effort on doctrine, process, and education
- **Effects-Based Operations only exacerbate the current problems in assessment**



Introduction



- Why is assessment so hard?
- Lessons from Past Assessments
- What are Effects-Based Operations?
 - Are we all using the same doctrine and terminology?
- Assessment Challenges Posed by EBO
- EBO Measures (MOPs & MOEs)
- EBO Assessment Advise



Why is Assessment so hard?



- Desert Shield/Storm (CAOC): “Interviewing planners and collecting the mission data were **long and tedious processes** complicated by the fact the ATO was evolving on a daily basis.”
- Allied Force (CAOC): “**Capturing data** and then giving information to the warfighter provided to be a monumental task”
- Enduring Freedom (COCOM): “What do you mean I can’t use my assessment tool on the **JWICS system**”
- Iraqi Freedom (COCOM): “**Can only assess what you plan and have information for**”

Assessment is the wagging tail of the planning dog and depends on the availability of timely/accurate information



Lessons from Past Assessments



1. (Biggest Problem) Failure to tailor the assessment process to **the magnitude and tempo of operations**
 - Failure to prioritize; in high tempo (24/7) or large magnitude (OIF) operations **you can't access everything**
 - Failure to agree and use the same information tools; **doesn't matter whose is better just use the same ones**
2. (Another Big Problem) **Lack of information**
 - “**Perfect**” MOE with no source data
 - **Can't access what you don't plan**
 - Can't access unless you deliberately **task resources** (ISR, HUMINT, etc.) to collect and process information
 - Not everyone can see the same information (**classification issues**)



Lessons from Past Assessments



3. (Hidden Problem) Applicability of the assessment to the **commander's decision making needs**
 - **Designing an assessment process without commander input.** Has any one actually ask the commander what he wants to see?
 - **No planner feedback on the assessment process.** Do the planner's actually look at the assessment products or do they just plan without it?
4. Assessment has been a pick up game
 - Many assessments have started **after operations have begun** (Allied Force, Enduring Freedom)
 - Most assessment teams **form for the operation and then disband shortly after**
 - **Impossible to provide realistic training**



What are Effects-Based Operations?



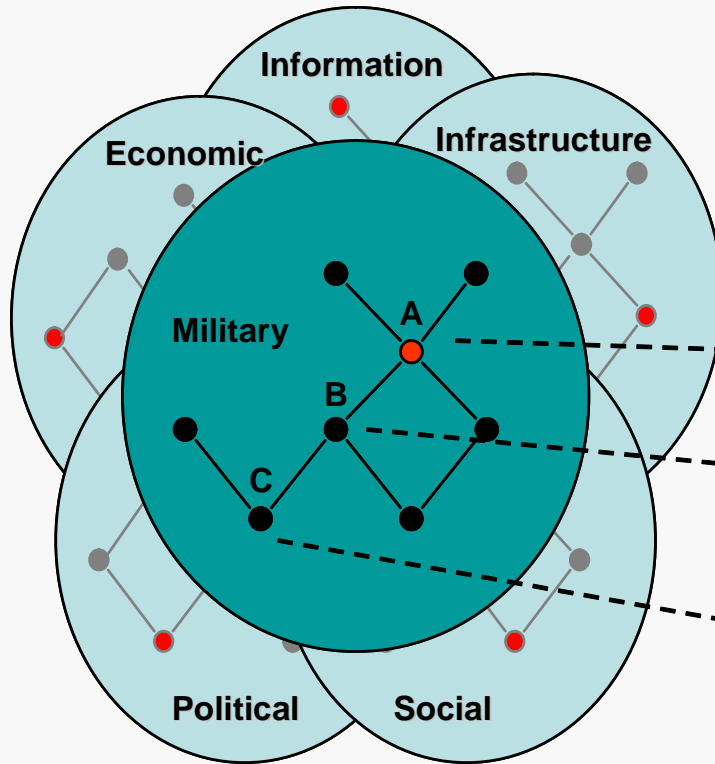
“Operations that are planned, executed, assessed, and adapted based on a holistic understanding of the operational environment in order to influence or change system behavior or capabilities using the integrated application of selected instruments of power to achieve directed policy aims.”

*JFCOM JWFC Doctrine Pamphlet 7,
Operational Implications of EBO Nov 04*

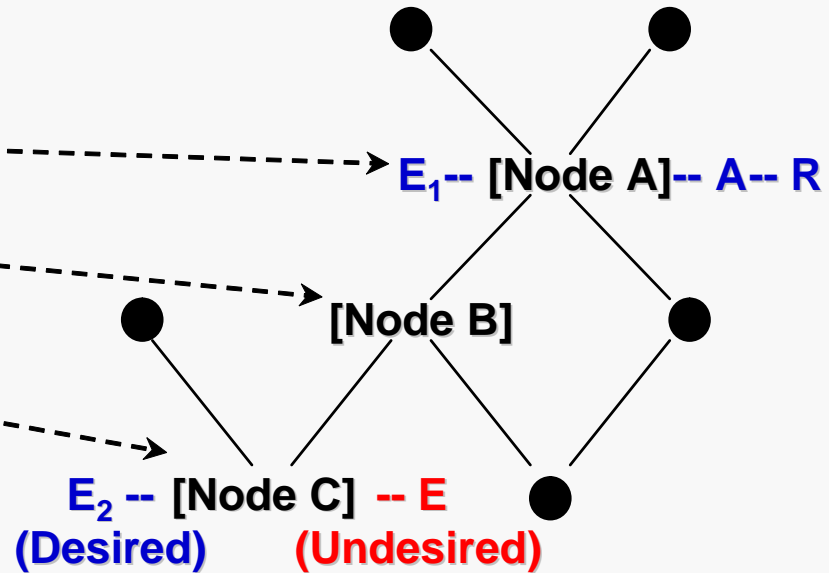
Anyone using a different definition? If so why?



What are Effects-Based Operations?



Enemy Systems of Systems Model

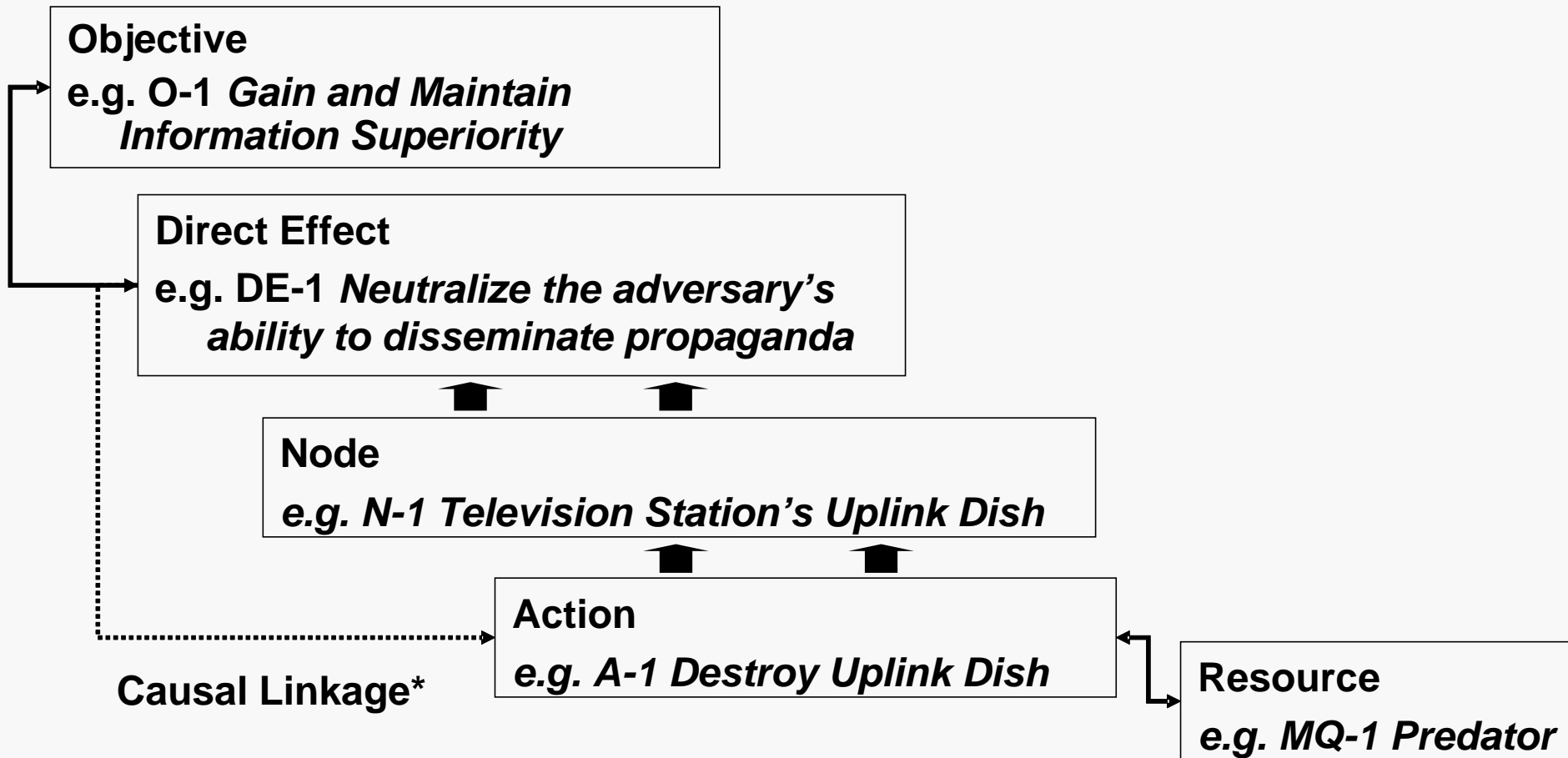


Friendly ENAR Within a PMESII Element

Anyone using a different planning format? If so why?



What are Effects-Based Operations?



***Note: Causal linkages explain why planners think the proposed actions will create the desired effect.**



Assessment Challenges of EBO



- **Now have to assess effects in addition to actions (tasks)**
 - Have at least doubled the assessment load (assuming only one E-A combination)
 - Have to identify when we have the wrong cause and effect link; wrong E-N-A-R chain
 - Effects are not necessarily observable from our vantage point
 - Effects may have a time lag associate with them



Assessment Challenges of EBO



- Connection between strategic, operational, and tactical objectives, effects, and actions and their assessments
 - Traditional assessment lines are now blurred
 - Might approach these ties via the Resource (R) nodes



EBO Measures



- Accomplishment of the *action* via measures of performance (MOPs)
 - Relatively easy to measure
 - Did the bomb hit its target?
 - Did the diplomatic message get passed to the host nation foreign minister?
 - In most cases, the MOPs should be yes or no answers



EBO Measures



- Attainment of the effect (change in system state) via measures of effectiveness (MOEs)
 - More difficult to measure
 - Probably will not occur simultaneously with the actions
 - Easier to measure for kinetic actions than non-kinetic actions



EBO Assessment Advise



- Assess all planned actions
- Only assess high-payoff effects (defined as effects against key nodes) and sample other effects unless ops tempo allows assessment of all effects
- Join with the planners early at the hip; planning without some intent to assess the success or failure is means for failure
- Pre-plan, coordinate, and prioritize intel collection assets to collect data to evaluate Effect MOEs
 - Understand lag time from data collection to processed information



End of Assessing EBO presentation