



ANNEX 3-12 CYBERSPACE OPERATIONS

ASSESSMENT OF CYBERSPACE OPERATIONS

Last Updated: 30 November 2011

Assessment encompasses efforts, at all levels of conflict, use logical and defensible constructs to evaluate effects, gauge progress toward accomplishment of actions and objectives, and make strategy recommendations to shape future action. Assessments of operations conducted in and through cyberspace follow the same general procedures as the assessment of all other operations and are informed by a range of inputs, including [intelligence, surveillance, and reconnaissance](#) (ISR), munitions effectiveness, and operational reporting.

There are two primary types of assessments accomplished at the operational level, tactical and operational-level. [Tactical assessment](#) (TA) is generally performed by the [air operations center's](#) (AOC) ISR division and focuses on the effectiveness of tactical operations. [Operational-level assessment](#) (OA) of strategy is usually executed within the strategy division, provides insights and recommendations on the relevant commander's (i.e., [commander, Air Force forces](#) (COMAFFOR), [joint force air component commander](#) (JFACC) or [commander, 24th Air Force](#) (24 AF/CC)) strategy.

Tactical Assessment (TA)

TA is the overall determination of the effectiveness of tactical operations. It consists of the evaluation of tactical actions against assigned tactical tasks using empirical, objective, and usually quantifiable measures for collection and analysis. TA analysts collect, aggregate, analyze, and archive relevant data. This level of assessment determines commander need to take further tactical action. TA answers such questions as: *“Was the intended action accomplished?”*, *“Was the intended direct effect created?”*, *“Has the target's status changed?”*, and *“Is re-engagement, re-attack, or ‘re-influence’ necessary?”*

To make assessment most effective, measures and indicators should be determined during the planning process. TA of an operation is based on post-mission analysis. Task accomplishment and resulting potential direct effects are measured through a variety of intelligence and analytical methods, including signals intelligence (SIGINT) and geospatial intelligence (GEOINT), among other means.

Indirect effects, such as potential changes in behavior that are very difficult to assess in a time-sensitive manner, are best assessed at the operational level and above.

Operational-Level Assessment (OA)

OA is an analytically supported judgment of a commander's strategy (ends, ways and means). This type of assessment is the first level at which complex indirect effects are normally evaluated, progress toward operational and strategic objectives is measured, and recommendations for strategy adjustments and future action extending beyond re-attack are made.

Assessment at the operational level focuses on both effects and performance via measures of effectiveness (MOE) and measures of performance (MOP), respectively. MOEs are "used to assess changes in system behavior, capability, or operational environment that is tied to measuring the attainment of an end state, achievement of an objective, or creation of an effect."¹ MOPs are "used to assess friendly actions that [are] tied to measuring task accomplishment."² In short, MOEs help measure progress toward the end state while MOPs are used to measure the strategy's ways and means. These measures should flow from the development of criteria that define the conditions required to receive specific assessment grades. This grading of the strategy's ends, ways, and means is often presented using a stoplight chart – with specific criteria designated for red, yellow, and green – in order to yield consistent, meaningful, and understandable feedback to the commander.

In order to accomplish this assessment process within the interrelated and complex nature of many cyberspace operations, operational-level cyberspace planners and analysts should develop an intimate understanding of the linkage between cyberspace and the supported mission or operation. This requires direct feedback from those closest to observing the intended effects, such as the Airmen executing cyber-enabled Air Force missions or the warfighters in theater, in order to assess the level of cyberspace performance and effectiveness. For example, the assessment of cyberspace operational effects in support of influence operations requires an in-depth understanding of the warfighter's desired impact on behavior and the ability to measure any resulting behavioral changes.

Situation Reporting

In addition to the assessment provided by the strategy team regarding conduct of combat operations, the COMAFFOR/JFACC and 24 AF/CC should receive daily reports on the status of friendly forces. Commanders should prioritize assets by their criticality

¹ JP 3-0

² Ibid.

to operations and have situational awareness of their linkages in the domain. In addition, they should anticipate cascading effects of degraded operations similar to attacks on assets in other domains. Additionally, the 24 AF/CC should ensure situation reporting is operationally-focused and addresses enemy actions and attacks, friendly actions taken to mitigate threats, and subsequent impact on friendly forces.
