

12TH ICCRTS
ADAPTING C2 TO THE 21ST CENTURY

**In Search of the Air Superiority Thermometer:
Assessing the state of the world during Effects Based Operations**

Topics: C2 Metrics and Assessment; C2 Concepts, Theory and Policy; Cognitive and Social Issues

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ABSTRACT

As Effects Based Operations take shape in the operational fight the ability to measure 'the effect' faces a widening gap from measuring the traditional, physical bomb damage. EBO being functional by nature seeks to identify high payoff targets (because of their functional value) that support the achievement of numerous desired effects. The further an effect is from physical actions within the battlespace, the more abstract it is and the more abstract its indicators need to be. These effects cannot be measured by relying on low level measures such as Battle Damage Assessment simply rolled up from below. Complicating the assessment process to a greater degree is the lack of physical damage assessment to roll up with the introduction of non-kinetic types of combat power (Perception, Psyop, Comp. Network) to adequately appreciate its contribution to the fight.

Cognitive Systems Engineering yielded a functional understanding of Effects, their network and that assessment must utilize a complementary set of quantitative measures (Exe Status, MISREPs, and BDA reports) and qualitative independent indicators at various levels of abstraction within the Effects network. The critical payoff for the warfighter is visualizing these indicators in a manner that gives the warfighter a holistic feel for the state of a single effect, the supporting actions and the overall state of the effects network to support the warfighter's decision making needs.