

12<sup>TH</sup> ICCRTS  
Adapting C2 to the 21<sup>st</sup> Century

**Hypothesis Testing of Edge Organizations:  
Laboratory Experimentation using the ELICIT Multiplayer Intelligence Game**

Track Session:  
Organizational Issues

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## **Abstract**

The *Edge* represents a fresh approach to organizational design. It appears to be particularly appropriate in the context of modern military warfare, but also raises issues regarding comparative performance of alternate organizational designs. Building upon prior C2 research, we seek to understand the comparative performance of the *Edge* and other organizational forms, across various mission-environmental contexts, network architectures, professional competency distributions, and other conditions likely to have contingent impacts upon the relative fit and hence performance of such forms. Leveraging recent advances in computational organization theory, we extend our campaign of computational experimentation to conduct a series of laboratory experiments using the ELICIT multiplayer intelligence game. ELICIT requires a team of “intelligence analysts” to collaborate—in a network-centric, information-processing environment—via information sharing pertinent to a fictitious and stylized terrorist plot. The laboratory setting enables the customary levels of control and manipulation expected with experimentation, which provides for excellent reliability and internal validity of results. Additionally, we use the results of our prior computational experiments to suggest in part a candidate set of research hypotheses for testing; to identify a candidate set of dependent variables for measurement; and to establish an empirical basis for further validation and calibration of our computational models in this, intelligence-focused, C2 environment. Hence this part of our campaign of experimentation is explicitly model-driven, and reveals another, novel, powerful approach to C2 research. Results should enable us to isolate some particularly powerful influences over and determinants of C2 efficacy—across organizational forms and contingent conditions—and to buttress the already solid foundation of external validation that supports our computational tools. Results should also help to illustrate the power of the ELICIT game to support compelling C2 research, and to contribute important, new knowledge in terms of both organization theory and C2 practice.