

ELICIT Overview

ELICIT is the Experimental Laboratory for the Investigation of Collaboration, Information-sharing, and Trust. The CCRP (Command and Control Research Program www.dodccrp.org) sponsored the development of a software platform that can be used to empirically explore the relationships among (1) approaches to command and control and organization, (2) team and individual characteristics, and (3) value-related measures that constitute the network-centric value chain. The network-centric value chain includes a robustly networked entity, information and collaboration behaviors, the quality of information and awareness, shared awareness, synchronization, and effectiveness. ELICIT will support hands on classroom learning about different approaches to command and control and human decision making.

The CCRP is actively encouraging and facilitating the formation of a global COI (community of interest) that will accelerate the development of a better understanding of network-centric concepts, approaches, and capabilities as well as power to the edge principles by enabling researchers to build upon and complement one another's work, collaborate on campaigns of experimentation, and develop a shared body of knowledge. An ELICIT COI has been established as a result. It has members from several countries— including Canada, Germany, Portugal, Singapore, Chile, the U.K. and the U.S.— who are actively engaged in experimentation and analysis, as well as the development of additional tools to support this research.

The initial version of the ELICIT software platform has been and continues to be enhanced. A new, agent-based version is currently under development to support constructive experimentation. The instrumented ELICIT software platform supports a wide variety of applications and controls, records all permitted interactions between and among participants, and produces a transaction log for measurement and analysis. Tools have been and continue to be developed to extract useful data from these transaction logs. Analyses have been ongoing. Some have already resulted in research papers that have been posted on the ELICIT website.

The ELICIT software platform supports an information-intensive counterterrorism task that requires abundant communication and collaboration between participants to uncover a fictitious terrorism plot. It currently uses a scenario that focuses on the task of discovering the “who,” “what,” “when,” and “where” of a future terrorist attack. Information is provided to each of the participants when the session begins and at two other times during play, but information received by any individual participant is insufficient to solve the problem without collaborating with others. The participants receive instructions about the nature of their organization and the information-sharing modalities available to them. These constitute an experimental treatment and can be varied considerably to “create” a particular approach to command and control and organization. The participants can be selected from one organization, one type of organization, or from many organizations with any mix of individual and team characteristics. The possibilities are virtually limitless. The transaction log and surveys or interviews associated with each application collect data that can be used to measure information sharing and collaboration behaviors as well as a variety of value metrics including the ability of individuals and teams to correctly identify the “who,” “what,” “when,” and “where” of a future terrorist attack and the time required to do so.

The ELICIT software platform, related tools, and the empirical data that have been collected are available at no cost to members of the ELICIT COI. The CCRP and members of the ELICIT COI also offer assistance in setting up the software platform and carrying out applications. To become a member of the ELICIT COI, an individual or organization must agree to conduct, in a scientifically rigorous manner, an application demonstrating to students the difference between operating in a traditional hierarchy and an edge organization. In addition, the individual or organization must agree to, within a specified time, provide all of the results of the applications to the CCRP for posting to the COI website so that the empirical data are available to the community. Members are expected to craft papers related to their work that meet community standards, present these papers at the International Command and Control Research and Technology Symposium, and publish papers in the International Command and Control Journal.

Currently, empirical data collected from applications at Boston University, the Naval Postgraduate School in Monterey, the United States Military Academy at West Point, the Portuguese Military Academy and the Singapore Armed Forces have been posted to the ELICIT COI website. Information about the ELICIT and the COI, as well as papers related to ELICIT, can also be found on the CCRP website.