

12TH ICCRTS
“Adapting C2 to the 21st Century”
A Sensemaking Experiment – Enhanced Reasoning Techniques to Achieve
Cognitive Precision

Topics: Track 4 (Cognitive and Social Issues); Track 6 (C2 Metrics and
Assessment); Track 5 (Organizational Issues)

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The purpose of this research was to conduct a pilot study of techniques from Klein Associates and Cognitive Edge to improve military sensemaking, specifically in the area of cognitive precision. FSD defines precision as the “collection and connection of the right dots”, i.e. relevant data. Several obstacles to cognitive precision were identified in the areas of seeing information (info overload, pattern entrainment, bounded awareness), sharing information (groupthink, compartmentalized knowledge) and finally, acting on the interventions directly targeting these problems – abstraction of situation to a higher level, enforced alternative and hypothetical reasoning, greater diversity and externalization of insights for discussion or critique, etc. These interventions were tested with 7 groups of military and intelligence personnel in the context of two “garden-path” type scenarios – a military planning task and an intelligence assessment task, within which were embedded weak signals for detection. While the experiment successfully demonstrated many of the above-mentioned obstacles; more importantly, it was found that the interventions as a whole proved useful in amplifying and identifying weak signals which were otherwise seldom detected. The next step would be to systematically assess and select the most useful interventions to form an Anticipatory Thinking Model, as a means to improve cognitive precision for Sensemaking.