

12TH ICCRTS
“Adapting C2 to the 21st Century”

Title of Paper
Flexible Use of Limited Airspace

Suggested Tracks
Track 1: C2 Concept, Theory, and Policy
Track 7: Network-Centric Experimentation and Applications
Track 5: Organizational Issues

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This paper describes how airspace can be used as a continuum, which leads to integrated, coordinated and flexible usage of limited space, and hence shorter OODA loop. For a country without geographical depth, airspace is a premium resource, and it is critical to manage the limited airspace flexibly and dynamically. Flexible Use of Limited Airspace (FULA) is an experimental concept that deviates from current modus operandi of divide and operate, which maybe sub-optimal in terms of airspace management and can be inflexible to dynamic requirements.

In FULA, we envisage the centralization and decentralization of airspace management working in tandem to solve airspace congestion and conflicts at various levels. Under centralized management, we incorporate the use of logic engine that helps to detect conflicts and provide de-confliction options, and advance cognitive visualization that helps to focus the attention of the controllers to the conflicts. Under decentralise management, we see a necessary role for automated platform to platform deconfliction among the slow-movers (helicopters and UAVs). It is envisaged that the FULA concept, supported by our Integrated Knowledge C2 (IKC2) backbone, will help to flexibly and dynamically manage airspace, and ultimately lead to breakthrough in C2 processes and ops concepts.