Autonomy and C2 Technical Thrust
Autonomy, Command and Control, and Decision Support Core
Technology Competency

The Autonomy, Command and Control, and Decision Support Technology Thrust is focused on developing and delivering trusted, highly-autonomous, command and control (C2) and decision making technologies for the Air Force and the joint fight. Command and control, an Air Force Service Core function, is about making decisions and having the right information to make those decisions. While C2 encompasses people, and processes, this Technology Thrust focuses on the fusion of information and C2 systems and technologies to exploit, interact, and reason over information for making decisions more efficiently and effectively.

Like Boyd’s OODA loop, the process of monitoring, assessing, planning, and executing (MAPE) is key to decision making and C2 processes. With the Air Force responsible for conducting operations in three domains - air, space, and cyber - the Technology Thrust is focused on developing technologies that integrate C2 capabilities within and among those three domains. To be able to monitor and assess technologies to provide comprehension, situational understanding and the capacity to anticipate are essential enablers for decision making systems. The interrelationships of the Air Force’s C2 needs requires new technologies to deliver capabilities to fuse information and integrate C2 in three domains each with dramatically different characteristics of speed, time, and distance while also being able to interact with land and maritime domains. Moreover, to have the agility to meet decision support needs across the spectrum of conflict, future C2 systems will require high levels of synchronization, humans aided by machines with autonomous capabilities, and a pervasive ability to constantly assess if we’re doing the right things and if we are doing those things right.

Mr. Daniel F. Fayette

Mr. Daniel F. Fayette is the lead for the Autonomy, Command and Control and Decision Support (AC2) Technology Thrust. This thrust is researching and developing technology solutions to enable comprehensive understanding and agile operations in an Integrated Operating Environment on a global scale. Mr. Fayette received a MS Electrical Engineering degree from Syracuse University in 1985 and his BS Electrical Engineering degree from the University of Detroit in 1980. Mr. Fayette is assigned to the the Information Systems Division in the Air Force Research Laboratory Information Directorate (AFRL/RIS), Rome Research Site, Rome, N.Y. The AFRL/RIS Division provides Command and Control (C2) solutions and advanced development prototypes for Air Force and Joint community use. Mr. Fayette’s responsibilities include leading the AC2 technical area, and interacting with strategic partners and stakeholders to deliver net enabled C2 capabilities to evolving and future warfighting systems in the air, space and cyber domains.