

Aircraft Agile Integration-Design for Quick Reaction Capability Programs

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Abstract. Military Quick Reaction Capability (QRC) programs are becoming more typical; with miracles expected. Higher performance and quality are demanded in less time with reduced cost. Aircraft platforms are continually modified for the latest mission system technology, which often requires a unique balance of secondary aircraft systems (structure, environmental control, and electrical). This paper investigates an agile integration-design architecture that is capable of reducing time and cost to the customer, while increasing mission performance and quality. A successful implementation would include increased risk mitigation for the program, as well as flexibility for future system evolution or even mission repurposing. With commercial aircraft as the platform for QRC mission systems integration, this paper shows how to create mission system modifications on a much shorter time scale than currently possible, by identifying and exploiting aircraft features that exist across multiple platforms, or exist in reoccurring patterns on the same platform.