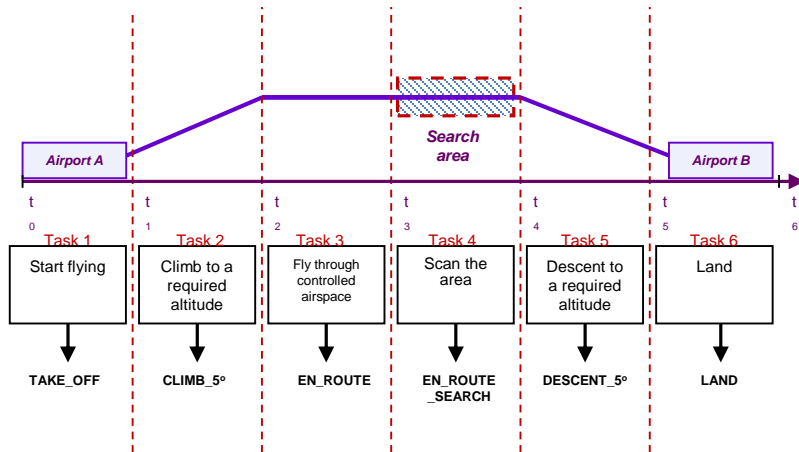


Background

- Phased mission modelling is typically applicable to transport systems.
- A mission is represented by a series of phases.
- Mission success requires the successful completion of each of the phases.



Objectives

- To develop phased mission models where the requirements for success (and therefore failure) can differ from one phase to another.
- The models will be able to accurately quantify the effects of dependencies which may exist between components & of non-constant component failure rates.

Methodology

- Petri Net & Markov models are used to model component degradation, failure and maintenance. Outputs from these models are used to populate traditional Fault tree (FT) structures.
- FTs are then quantified and analysed using Binary Decision Diagram (BDD) based techniques which are efficient and capable of handling component and event dependencies.

