

This thesis identifies constraints for safe ground airport operations. These operations consist of runway assignment, taxi operations planning and gate scheduling. The aim of this thesis is to show how this problem can be formulated as constraint satisfaction problem and then solved as a scheduling problem. Based on this model, an application that illustrates these concepts is designed and implemented. This application enables a visualisation of results. An extendable constraint solver was implemented for the purpose of this application. This solver can be used to solve problems from other domains as well and also enables easy change of search strategy.