Constraint programming approach to multiobjetive forest management with adjacency restrictions

Eduardo Eloy, Vladimir Bushenkov, Salvador Abreu

Abstract

Forest management is an activity of prime economic and ecological importance. Managed forest areas can span very large regions and their proper management is paramount to an e ective development, in terms both of economic and natural resources planning. Managed activity consists of individual and mutually independent policy choices which apply to distinct patches of land (named stands) which, as a whole, make up the forest area. A forest management plan typically spans a period on the order of a century and is normally geared towards the optimisation of economic metrics (e.g. total wood yield)

In this talk we present a method which uses declarative methods to formalise and solve a long-term forest management problem. We do so based on a state-of-the-art constraint programming system, which we extend to more naturally express concepts related to the core problem.