

Part II

Techniques

Introduction

In the sixth chapter a modeling process is presented that allows us to make decisions using optimization multi-criteria and the location of parks from the selection of a set of green areas conducive, in urban areas such as Mexico City. This modeling process consists of steps ranging from the structuring of the problem to the use of a procedure that interfaces between a Geographic information system (GIS) and multi-criteria optimization model of discrete location. By using this procedure, results are obtained for locating parks.

The principal aim of the seventh chapter is to show a network location services model for a specific problem, which has originally been formulated with just one objective. The multi-objective strategy has been useful in situations where there is more than one objective and where in many cases they may be contradictory. Such approach does not consider interdependence among each other. Multi-level programming, on the other hand, does take it into consideration, which allows for a hierarchical organization of the objectives and the consideration of relationships among them.

Finally, in the eighth chapter, an alternative to determinate the demand for the inventory control by using fuzzy sets for its calculation under uncertainty is shown, and in this way, the subjective knowledge and administrative experience is incorporated in its determination.

