Identifying buildings in aerial images using constraint relaxation and variable elimination

Abstract:
The authors show how constraint logic programming can help detect buildings from the air using object recognition. The recognition system described in the article uses constraint relaxation and variable elimination to handle uncertainty and unobservability of building parts. The authors show how they incorporate explicit models in the subproject “Building Extraction” by using constraint techniques and logic programming embedded in the Eclipse System.

Stichworte:
Building Extraction, CSP, Constraint Logic Programming, Constraint Relaxation, Geometric Constraints, Inexact Graph Matching, Object Recognition, Over-Constrained Systems, Variable Elimination, Locenter, Data_generation_and_object_reconstruction, Spatial_modeling_and_algorithms, Semantic_modeling