

The Genetic Algorithm with Rough Set Theory
Incorporated into the Patent Composition

Wen-Yau Liang and Chun-Che Huang

National Changhua University of Education and National Chi Nan University

Abstract

Today, there is a need to manage composite patents based on emerging technologies in business. The research related to ranking candidate patents and selecting optimization strategies does not consider the constraints of non-functional properties. This paper proposes a method for incorporating the GA and rough set theory that can (i) solve problems that can be decomposed into functional requirements, and (ii) improve GA performance by reducing the range of the initial population and constrained crossover using rough set theory. Based on our experimental results, this approach has shown great promise and operates effectively.

Keywords: Genetic algorithm, patents, patents composition, rough set theory.