Abstract

Network optimization is about maximizing capacity, reducing associated cost, and enhancing service quality. As customers demand better and cheaper services from wireless service providers the need for better network coverage has increased and researchers has been working on it. Radio coverage generally is affected by variables such as base station performance, antenna arrangements and the locations of base stations and users Genetic algorithm (GA) has found its usage in telecommunications field because of the challenging factors and parameters involve in radio coverage optimization. A detailed review on the use of GA in achieving coverage optimization in cellular networks has been presented in this work. The paper looks at recent applications and detail analysis of each of the processes in GA application. It has been shown that the use of GA will provide a near optimal solution of radio facility placement hence the benefits from this evolutionary approach can be described as not only time saving but also efficient.

References
Application of Genetic Algorithm in Radio Network Coverage Optimization – A Review


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Index Terms

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Base station  Coverage  Fitness function  Genetic Algorithm  optimization