Swarm Intelligence as an Evolutionary Optimization for Smart Cities.

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The digitalization age of the electric network systems in Smart Cities uptakes an interactive communication platform and energy management systems. Smart Grid Systems however behave stochastically, highlighting the complexities of maintaining an optimal dispatch of distributed generation. Therefore, a proposed optimization method is studied to develop a future solution in solving the digital grid constraints. This paper incite an assessment on the most represented optimization methods that have been studied by recent scholars [1],[2] and [3], to address the digital grid phenomenon as adverted by [4]. Among various methods, the development of swarm intelligence such as Particle Swarm Optimization Algorithms (PSO) is considered to be one of high performance solution in tackling the varied demanding task of a digital grid. Taking into account of other technology options such as cogeneration systems [5], the swarm intelligence approaches is most useful when integrated in a smart grid architecture that calls for optimization in stochastic processes.

Keywords: Optimization; Swarm Intelligence; Smart Cities; Digital Grid

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