

# **Locating Best Geographical Location for Green Datacenter in Iran with Respect to Continental, Political and Social Conditions**

**Majid Hajibaba**

**Saeed Gorgin**

Department of Electrical Engineering and Information Technology, Iranian Research Organization for Science and Technology, Tehran, Iran

## **ABSTRACT**

Identifying and determining the geographic coordinates of the location of data center, is important for organizations. Evaluating, identifying and determining the coordinates depend on various factors, criteria and parameters while this diversity causes decision making be difficult for managers. This paper, for first time, comprehensively evaluates the decision criteria and explains the options available for hosting green data centers in Iran. The system presented in this paper, evaluate a comprehensive list of potential factors with respect to continental, political and social conditions and other factors. Then rank provinces in Iran to determine the geographical coordinates of data center. In this system, more than 40 criteria in four main categories include weather, natural disasters, facilities and unnatural events have been evaluated. The inference process, will be completed in an adaptive and flexible manner with integration and weighting parameters that obtained from experts' judgments and using a hierarchical analytics processing, and then by a major-voting mechanism. Finally, the system recommend appropriate geographical areas in high accuracy rate.

**Keywords:** Datacenter, Green Datacenter, Datacenter Site Locating, Datacenter Site Locating Criteria, Province Ranking.