



**The Korea Academic Society of
Digital Business Administration
(KASDBA)**
[사]한국디지털경영학회

**ICIDB-2016
Conference Program**



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Communication Technology and Digital Convergence
Business (ICIDB-2016)**

Chung-Ang University, Seoul, South Korea, Dec 16-17, 2016

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■ **Place:** International Conference Hall (4th Floor), Graduate School Building, Chung-Ang University, Dongjak-gu, Seoul, South Korea

■ **Organizer:**



The Korea Academic Society of Digital Business Administration (KASDBA) (사)한국디지털경영학회

■ **Co-organizer:**



Korea Institute of Digital Convergence (KIDICO)

Social Science Research Institute, Yeungnam University

■ **Sponsors:**

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Extended Advance Zonal Rectangular LEACH (EAZR-LEACH) for Wireless Sensor Networks

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Abstract

Wireless sensors Network (WSN) has made its presence essential around us because of its emerging applications. Energy efficiency is one of the key challenges for the WSNs. Researchers have developed many routing protocols to consume less energy in sensor nodes of a WSN. One of a method to save energy is known as clustering. A cluster head is responsible for gathering data from member nodes and forwards it to the base station. Many types of static clustering protocols have been developed to save power consumption and to select cluster head efficiently. Advance Zonal Rectangular LEACH (AZR-LEACH) is one of them; it works efficiently in large as well as small areas. For an optimal number of cluster head selection, it divides a large sensor field into rectangular clusters. These rectangular clusters are further grouped into zones for efficient communication between cluster heads and a base station. We propose an Extended advance zonal Rectangular (EAZR-LEACH), cluster reformation technique to minimize energy consumption in cluster head nodes. The dividing of rectangular clusters into parts, and to remove the cluster heads from advanced clusters helps to reduce the energy consumption in cluster head nodes and make network lifetime uniform. Simulation results observe the network stability, throughput, low energy consumption, increased network lifetime and reduced number of cluster heads.

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