
Does cluster communication require a base station

What is clustering based communication mode?

The clustering-based communication mode is considered as the most suitable communication mode for the wireless sensor networks. Clustering consists in selecting a set of cluster-heads from the set of sensor nodes and then regrouping the remaining sensor nodes around the cluster-heads.

What is cluster communication?

Cluster communication refers to the interaction among nodes within a cluster, typically involving single-hop communication where member nodes transmit data to a cluster head (CH) during allocated time slots.

What is a cluster based network?

The aim is to work efficiently like an infrastructure-based network and be appropriately managed by making topology less dynamic. In the cluster, a node responsible for Intra- and inter-cluster communication is known as cluster head, whereas the other nodes that share their data to cluster head for communication are called cluster members.

How does clustering work?

Clustering consists in selecting a set of cluster-heads from the set of sensor nodes and then regrouping the remaining sensor nodes around the cluster-heads. The cluster-members send the data to the cluster-head that sends it back to the base station.

In this study, we present an energy-efficient multi-hop inter-cluster communication mechanism between the cluster head and base station to extend the lifetime and energy ...

Abstract Clustering algorithms are necessary in Wireless Sensor Networks to reduce the energy consumption of the overall nodes. The decision of which nodes are the cluster heads (CHs) ...

When the sensor nodes use a multi-hop communication to reach the base station, the sensor nodes located close to the base station will have a higher energy load because ...

In this paper, to address the site planning and area clustering problems of mobile communication networks, the K-mean clustering algorithm, linear programming, K-mean ...

Dedicate a network for clusters During normal operations, base clustering communication traffic is minimal. It is, however, highly recommended that you have redundant communication paths ...

The developed model can facilitate the rollout of 5G technology. Due to the high propagation loss and blockage-sensitive characteristics of millimeter waves (mmWaves), ...

With the calibrated model, a detailed link budget analysis was performed on the planning area, calculating the maximum coverage radius required for a single base station to ...

Neighboring base stations are assigned different groups of channels so that the interference between base stations (and the mobile users under their control) is minimized. By ...

The previous cellular generations are network centric, meaning that they rely on base station for network setup and coordination. But 5G and future generations are expected ...

Through the comparison of AP clustering algorithm and adaptive AP clustering algorithm, the results show

that the clustering quality and operation efficiency of adaptive AP ...

In this paper, a novel clustering-based base station assignment algorithm has been proposed to support the deployment of IoT devices under cellular communication systems.

One generator set or two In most regions, a standby power system configuration typically uses 3-phase AC output power, where the single-phase loads are balanced equally ...

The model only depends on statistical CSI, thus enabling long-term cluster-ing. Based on notions from coalitional game theory, we propose a low-complexity distributed ...

Base Station But what exactly is a base station, and how does it work in wireless communication networks? This article explores the concept of base stations, their functions, ...

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