

Estonia LTE emergency communication base station hybrid energy earthquake relief



Overview

The paper aims to provide an outline of energy-efficient solutions for base stations of wireless cellular networks. A base station consists of antennas, radio transceivers, power units, batteries, backup generators, network access modules, and emergency control systems. It is on this ground that this work deals with the integration of LTE and satellite networks in both infrastructure-based and infrastructure-less topologies for PPDR purpose. It is aimed at providing people trapped.

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Designing efficient communication infrastructure in post-disaster

In this paper, we propose to design an efficient temporary communication network infrastructure for post-disaster scenarios with limited resources.

Feasibility Study on Disaster Management with Hybrid Network of ...

LTE base stations deployable during rescue mission backhauled on satellites system [2]. This system can provide coverage in situations where infrastructure-based systems are totally destroyed by the ...



Estonia shuts down wind and solar hybrid communication ...

· Energy consumption is a big issue in the operation of communication base stations, especially in remote areas that are difficult to connect with the traditional power grid,

Energy-efficiency schemes for base stations in 5G

Recognizing this, Mobile Network Operators are actively prioritizing EE for both network maintenance and environmental stewardship in future cellular networks. The paper aims to provide an outline of ...



Solutions for Sustainable and Resilient Communication Infrastructure ...

To this end, this paper provides a comprehensive exploration of the technological solutions and strategies necessary to build and maintain resilient communications networks that can withstand and ...

Post-earthquake functional state assessment of communication base

This paper proposes a Bayesian network method to evaluate the post-earthquake functionality of communication base stations. The method considers the dependence between the ...



Next-Generation Base Stations: Deployment, Disaster



Scenarios, Energy

Mobile base stations (COWs - Cell on Wheels) are deployed to the affected area. Satellite-supported emergency stations provide backup traffic channels.

ResQLink: A Next-Generation Hybrid Communication System for ...

This project suggests a Satellite-Terrestrial Hybrid Communication Protocol (STHCP) that leverages both satellite and terrestrial technologies to establish the required connectivity in times of crisis.



Solutions for Sustainable and Resilient Communication In

Resilient communications infrastructure is of paramount importance for effective disaster response and recovery. This disaster-resilient infrastructure should also respond to sustainability.

Emergency Communication System Based on Wireless LPWAN and ...

The ECS system proposed and simulated in this article consists of an autonomous wireless 4G/LTE base station and a LoRa network utilizing a hybrid IoT communication platform ...



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