Patent Search

Invention Title	A NOVEL ANTENNA SYSTEM FOR IOT APPLICATION AND METHOD THEREOF
Publication Number	24/2023
Publication Date	16/06/2023
Publication Type	INA
Application Number	202341036939
Application Filing Date	29/05/2023
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	ELECTRONICS
Classification (IPC)	H01Q 013200, H01Q 013600, H01Q 013800, H01Q 014800, H01Q 091600

Inventor

Name	Address	Country
Dr.Indradeep Kumar	Assistant Professor, Department of Aeronautical Engineering, Institute of Aeronautical Engineering, Dundigal, Hyderabad, Telangana, India. Pin Code:500043	India
Mr.Manu Kumar Thakur	Under Graduate Student, Department of Aeronautical Engineering, Institute of Aeronautical Engineering, Dundigal, Hyderabad, Telangana, India. Pin Code:500043	India
Dr.P.C.Praveen Kumar	Assistant Professor, Department of ECE, G.Pulla Reddy Engineering College (Autonomous), Kurnool, Kurnool District, Andhra Pradesh, India. Pin Code:518007	India
Mrs.Er.Jeetamitra Satapathy	Principal, Govt Industrial Training Institute, Nayapalli post, Unit: 8, Bhubaneswar, Odisha, India. Pin Code: 751012	India
Dr.Asa Jyothi G	Professor, Department of ECE, Malla Reddy Engineering College, Maisammaguda, Dulapally, Hyderabad, Telangana, India. Pin Code:500100	India
Mrs.Ch.Sridevi	Associate Professor, Department of ECE, B V C Engineering College (Autonomous), Odalarevu, Dr B. R. Ambedkar Konaseema District, Andhra Pradesh, India. Pin Code:533210	India
Mr.Kiran Babu Kommu	Assistant Professor, Department of CSE (DS), ACE Engineering College, Ankushapur, Ghatkesar Mandal, Medchal-Malkajgiri District, Telangana, India. Pin Code:501301	India
Mrs.M.V.Sheela Devi	Assistant Professor, KKR & KSR Institute of Technology and Sciences, Vinjanampadu, Vatticherukuru Mandal, Guntur, Andhra Pradesh, India. Pin Code:522017	India
Mr.Lakshmi Narayana Gumma	Assistant Professor, KKR & KSR Institute of Technology and Sciences, Vinjanampadu, Vatticherukuru Mandal, Guntur, Andhra Pradesh, India. Pin Code:522017	India
Dr.Madduru Sambasivudu	Associate Professor, Department of Computer Science and Engineering, Malla Reddy College of Engineering and Technology, Maisammaguda, Dhulapally, Secunderabad, Telangana, India. Pin Code:500100	India

Applicant

Name	Address	Country
Dr.Indradeep Kumar	Assistant Professor, Department of Aeronautical Engineering, Institute of Aeronautical Engineering, Dundigal, Hyderabad, Telangana, India. Pin Code:500043	India
Mr.Manu Kumar Thakur	Under Graduate Student, Department of Aeronautical Engineering, Institute of Aeronautical Engineering, Dundigal, Hyderabad, Telangana, India. Pin Code:500043	India
Dr.P.C.Praveen Kumar	Assistant Professor, Department of ECE, G.Pulla Reddy Engineering College (Autonomous), Kurnool, Kurnool District, Andhra Pradesh, India. Pin Code:518007	India
Mrs.Er.Jeetamitra Satapathy	Principal, Govt Industrial Training Institute, Nayapalli post, Unit: 8, Bhubaneswar, Odisha, India. Pin Code: 751012	India
Dr.Asa Jyothi G	Professor, Department of ECE, Malla Reddy Engineering College, Maisammaguda, Dulapally, Hyderabad, Telangana, India. Pin Code:500100	India
Mrs.Ch.Sridevi	Associate Professor, Department of ECE, B V C Engineering College (Autonomous), Odalarevu, Dr B. R. Ambedkar Konaseema District, Andhra Pradesh, India. Pin Code:533210	India
Mr.Kiran Babu Kommu	Assistant Professor, Department of CSE (DS), ACE Engineering College, Ankushapur, Ghatkesar Mandal, Medchal-Malkajgiri District, Telangana, India. Pin Code:501301	India
Mrs.M.V.Sheela Devi	Assistant Professor, KKR & KSR Institute of Technology and Sciences, Vinjanampadu, Vatticherukuru Mandal, Guntur, Andhra Pradesh, India. Pin Code:522017	India
Mr.Lakshmi Narayana Gumma	Assistant Professor, KKR & KSR Institute of Technology and Sciences, Vinjanampadu, Vatticherukuru Mandal, Guntur, Andhra Pradesh, India. Pin Code:522017	India
Dr.Madduru Sambasivudu	Associate Professor, Department of Computer Science and Engineering, Malla Reddy College of Engineering and Technology, Maisammaguda, Dhulapally, Secunderabad, Telangana, India. Pin Code:500100	India

Abstract:

The proposed invention introduces a novel antenna system designed specifically for Internet of Things (IoT) applications. The antenna system addresses the limitatio traditional antennas in terms of connectivity, communication efficiency, power consumption, and interference mitigation. It offers an adaptable hardware design that accommodates the diverse form factors and integration requirements of IoT devices. Advanced materials and manufacturing techniques are utilized to achieve a com lightweight design. The invention includes an optimization method that considers various factors such as antenna placement, radiation pattern analysis, impedance m and signal processing algorithms. This method allows for customization and fine-tuning of the antenna system to meet the specific requirements of different IoT app antenna system incorporates artificial intelligence (AI)-based decision-making capabilities, enabling real-time adjustments to optimize performance based on environ conditions. It supports seamless interoperability with various IoT protocols and standards. Advanced signal processing techniques, interference mitigation algorithms energy-efficient designs are incorporated to enhance signal quality, mitigate interference, and minimize power consumption. The proposed antenna system offers an communication range, improved reliability, and scalability, contributing to the advancement of IoT technology across various industries. Accompanied Drawing [FIGS.

Complete Specification

Description:[001] The proposed invention relates to the field of Internet of Things (IoT) and specifically focuses on a novel antenna system designed to enhance con and communication efficiency for IoT devices. The invention encompasses both the hardware design of the antenna system and a corresponding method to optimi performance.

.BACKGROUND OF THE INVENTION

[002] The Internet of Things (IoT) has emerged as a transformative technology that connects various devices and enables seamless communication and data exchar applications encompass a wide range of sectors, including smart homes, industrial automation, healthcare, transportation, and agriculture, among others. However successful implementation of IoT relies heavily on reliable and efficient wireless connectivity.

[003] One of the critical components in any wireless communication system is the antenna. Antennas are responsible for transmitting and receiving electromagneti facilitating the exchange of data between IoT devices and the surrounding environment. As IoT deployments continue to expand and diversify, there is a growing ne antenna systems that can provide enhanced performance in terms of coverage, range, power consumption, and interference mitigation.

[004] Traditional antenna designs have limitations when it comes to fulfilling the requirements of IoT applications. Conventional antennas may suffer from limited r poor signal quality, and susceptibility to interference, leading to unreliable connections and suboptimal data transmission. Additionally, IoT devices often operate in challenging environments with physical constraints, such as small form factors, low power consumption, and integration with diverse platforms.

[005] To address these challenges, the proposed invention introduces a novel antenna system specifically tailored for IoT applications. The system aims to optimize connectivity, communication efficiency, and overall performance, thereby enabling reliable and seamless interactions between IoT devices

View Application Status