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(57) Abstract :
 The invention presents an advanced method for wireless data transfer, optimizing speed, reliability, and security. This method utilizes adaptive techniques to cater to diverse data types, preemptive measures for potential packet loss mitigation, intelligent bandwidth allocation, dynamic encryption for enhanced security, and real-time adjustments based on environmental feedback, ensuring optimal wireless communication across a range of devices and scenarios. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 21 No. of Claims : 10

“FORM 1 THE PATENTS ACT 1970 (39 of 1970) and THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT (See section 7, 54 and 135 and sub-rule (1) of rule 20)				(FOR OFFICE USE ONLY)	
				Application No.	
				Filing date:	
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1. APPLICANT’S REFERENCE / IDENTIFICATION NO. (AS ALLOTTED BY OFFICE)					
2. TYPE OF APPLICATION [Please tick (✓) at the appropriate category]					
Ordinary (✓)		Convention ()		PCT-NP ()	
Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()	Divisional ()	Patent of Addition ()
3A. APPLICANT(S)					
Name in Full		Nationality	Country of Residence	Address of the Applicant	
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3B. CATEGORY OF APPLICANT [Please tick (✓) at the appropriate category]					
Natural Person ()		Other than Natural Person			
		Small Entity (✓)		Startup ()	Others ()
4. INVENTOR(S) [Please tick (✓) at the appropriate category]					
Are all the inventor(s) same as the applicant(s) named above?		Yes ()		No (✓)	
If “No”, furnish the details of the inventor(s)					
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5. TITLE OF THE INVENTION			
"A METHOD FOR IMPROVING DATA TRANSFER IN A WIRELESS NETWORK"			
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Country	Application Number	Filing date	Name of the applicant	Title of the invention	IPC (as classified in the convention country)												
9. IN CASE OF PCT NATIONAL PHASE APPLICATION, PARTICULARS OF INTERNATIONAL APPLICATION FILED UNDER PATENT CO-OPERATION TREATY (PCT)																	
International application number			International filing date														
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Original (first) application No.			Date of filing of original (first) application														
11. IN CASE OF PATENT OF ADDITION FILED UNDER SECTION 54, PARTICULARS OF MAIN APPLICATION OR PATENT																	
Main application/patent No.			Date of filing of main application														
12. DECLARATIONS																	
i) Declaration by the inventor(s)																	
<p>(In case the applicant is an assignee: the inventor(s) may sign herein below or the applicant may upload the assignment or enclose the assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period).</p> <p>I/We, the above named inventor(s) is/are the true & first inventor(s) for this Invention and declare that the applicant(s) herein is/are my/our assignee or legal representative.</p> <p>(a) Date 24/08/2023</p> <table border="1"> <thead> <tr> <th>(b) Name</th> <th>(c) Signature</th> </tr> </thead> <tbody> <tr> <td>1. Prof. James Stephen Meka</td> <td></td> </tr> <tr> <td>2. Mr.I.Ravi Kumar</td> <td></td> </tr> <tr> <td>3. Prof. Augustine Tarala</td> <td></td> </tr> <tr> <td>4. Mr.K. Joseph Noel</td> <td></td> </tr> <tr> <td>5. Mr.Karri Nagaraju</td> <td></td> </tr> </tbody> </table>						(b) Name	(c) Signature	1. Prof. James Stephen Meka		2. Mr.I.Ravi Kumar		3. Prof. Augustine Tarala		4. Mr.K. Joseph Noel		5. Mr.Karri Nagaraju	
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5. Mr.Karri Nagaraju																	
(ii) Declaration by the applicant(s) in the convention country																	
<p>(In case the applicant in India is different than the applicant in the convention country: the applicant in the convention country may sign herein below or applicant in India may upload the assignment from the applicant in the convention country or enclose the said assignment with this application for patent or send the assignment by post/electronic transmission duly authenticated within the prescribed period)</p> <p>I/We, the applicant(s) in the convention country declare that the applicant(s) herein-</p>																	

is/are my/our assignee or legal representative.

(a) Date

(b) Signature(s)

(c) Name(s) of the signatory

(iii) Declaration by the applicant(s)

I/We the applicant(s) hereby declare(s) that: -

- I am/ We are in possession of the above-mentioned invention.
- The provisional/complete specification relating to the invention is filed with this application.
- ~~The invention as disclosed in the specification uses the biological material from India and the necessary permission from the competent authority shall be submitted by me/us before the grant of patent to me/us.~~
- There is no lawful ground of objection(s) to the grant of the Patent to me/us.
- I am/we are the true & first inventor(s).
- ~~I am/we are the assignee or legal representative of true & first inventor(s).~~
- ~~The application or each of the applications, particulars of which are given in Paragraph-8, was the first application in convention country/countries in respect of my/our invention(s).~~
- ~~I/We claim the priority from the above mentioned application(s) filed in convention country/countries and state that no application for protection in respect of the invention had been made in a convention country before that date by me/us or by any person from which I/We derive the title.~~
- ~~My/our application in India is based on international application under Patent Cooperation Treaty (PCT) as mentioned in Paragraph-9.~~
- ~~The application is divided out of my /our application particulars of which is given in Paragraph-10 and pray that this application may be treated as deemed to have been filed on DD/MM/YYYY under section 16 of the Act.~~
- ~~The said invention is an improvement in or modification of the invention particulars of which are given in Paragraph-11.~~

13. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION

(a) Form 2

Item	Details	Fee	Remarks
Complete/ Provisional specification) #	No. of pages: 17		
No. of Claim(s)	No. of claims: 10 No. of pages: 02		
Abstract	No. of pages: 01		
No. of Drawing(s)	No. of drawings: 02 No. of pages: 01		

In case of a complete specification, if the applicant desires to adopt the drawings filed with his provisional specification as the drawings or part of the drawings for the complete specification under rule 13(4), the number of such pages filed with the provisional specification are required to be mentioned here.

- (b) Complete specification (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).
- (c) Sequence listing in electronic form
- (d) Drawings (in conformation with the international application)/as amended before the International Preliminary Examination Authority (IPEA), as applicable (2 copies).
- (e) Priority document(s) or a request to retrieve the priority document(s) from DAS (Digital Access Service) if the applicant had already requested the office of first filing to make the priority document(s) available to DAS.
- (f) Translation of priority document/Specification/International Search Report/International Preliminary Report on Patentability.
- (g) Statement and Undertaking on Form 3
- (h) Declaration of Inventorship on Form 5
- (i) Power of Authority

**(j) Total fee ₹.....in Cash/ Banker's Cheque /Bank Draft bearing No.....
Date on Bank.**

I/We hereby declare that to the best of my/our knowledge, information and belief the fact and matters slated herein are correct and I/We request that a patent may be granted to me/us for the said invention.

Dated this 24th day of August 2023

Applicant: Andhra University

To,
The Controller of Patents
The Patent Office, at Chennai

Note: -

- * Repeat boxes in case of more than one entry.
- * To be signed by the applicant(s) or by authorized registered patent agent otherwise where mentioned.
- * Tick (/)cross (x) whichever is applicable/not applicable in declaration in paragraph-12.
- * Name of the inventor and applicant should be given in full, family name in the beginning.
- * Strike out the portion which is/are not applicable.
- * For fee: See First Schedule”;

FORM 2

THE PATENTS ACT, 1970

(39 of 1970)

&

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The Patent Rules, 2003

COMPLETE SPECIFICATION

(See section 10 and rule 13)

10

TITLE OF THE INVENTION

“A METHOD FOR IMPROVING DATA TRANSFER IN A WIRELESS NETWORK”

Applicant

NAME	NATIONALITY	ADDRESS
Andhra University	Indian	Visakhapatnam, Andhra Pradesh, India. Pin Code: 530003

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The following specification particularly describes the nature of the invention and the manner in which it is performed:

FIELD OF THE INVENTION

[001] The present invention relates generally to wireless communication networks, and more specifically, to a method for enhancing the efficiency, speed, and reliability of data transfer within such networks. The method proposed aims to optimize the communication between devices in a wireless environment, ensuring reduced latency, minimized packet loss, and optimal utilization of available bandwidth.

BACKGROUND OF THE INVENTION

[002] The following description provides the information that may be useful in understanding the present invention. It is not an admission that any of the information provided herein is prior art or relevant to the presently claimed invention, or that any publication specifically or implicitly referenced is prior art.

[003] Further, the approaches described in this section are approaches that could be pursued, but not necessarily approaches that have been previously conceived or pursued. Therefore, unless otherwise indicated, it should not be assumed that any of the approaches described in this section qualify as prior art merely by virtue of their inclusion in this section.

[004] In the modern age, wireless networks have become ubiquitous and are an essential aspect of everyday life. From smartphones and laptops to home appliances and vehicles, the necessity for devices to communicate wirelessly has grown exponentially. As the number of devices connected to wireless networks continues to surge, there is a pressing demand for efficient, rapid, and reliable data transfer. Data transfer is the backbone of any communication system, allowing devices to exchange information, be it for browsing the internet, streaming media, or controlling smart devices remotely.

[005] Historically, the earliest forms of wireless communication, such as radio transmissions, were simple and unidirectional. With the advent of modern computing and mobile devices, however, the need for bidirectional and multidirectional communication channels became evident. Various wireless protocols like Wi-Fi, Bluetooth, and cellular technologies emerged to address these needs. Each iteration of these technologies has brought about faster speeds and better reliability, but with each advance, the demand for more data and faster speeds has also increased.

[006] Additionally, as the world becomes more connected, there is a parallel growth in the sheer volume of data being transferred. For instance, a decade ago, text-based communication was predominant, but today's networks must accommodate high-definition videos, augmented reality, online gaming, and other data-intensive applications. Furthermore, the advent of the Internet of Things (IoT) has resulted in billions of devices connecting to the internet, each generating and consuming data. This explosion of data places tremendous strain on existing wireless networks, leading to problems like network congestion, increased latency, and packet losses.

[007] Another factor complicating the landscape is the diverse environments in which these networks operate. Urban areas, with their high-rise buildings, present different challenges compared to rural settings. Different materials, physical obstacles, and even atmospheric conditions can interfere with wireless signals, affecting data transfer rates and reliability. The unpredictability of user behavior, such as mobility patterns and data consumption habits, also adds to the complexity.

[008] Hence, while the advancements in wireless technology over the past few decades have been commendable, there remains a significant gap in ensuring efficient, rapid, and dependable data transfer in diverse scenarios. The pressing need for a holistic solution that addresses these myriad challenges and anticipates future demands underscores the motivation behind the present invention. This invention aims to introduce a novel method that fundamentally rethinks and refines the process of data transfer in wireless networks, making them more robust and prepared for the demands of tomorrow.

[009] To fully appreciate the magnitude of the challenge at hand, it's essential to understand the intricacies of the wireless data transfer paradigm. In today's digital age, every millisecond counts. Whether it's a financial transaction carried out in split seconds or a crucial medical data upload from a remote health monitoring device, delays, or interruptions can have serious repercussions. Even in less critical scenarios, like streaming a movie or playing an online game, disruptions can severely diminish the user experience.

[010] The standards and protocols that have been developed and adopted over the years, such as 4G, 5G, Wi-Fi 6, and others, are the result of extensive research and development. They introduced multiple antennas, beamforming, carrier aggregation, and other technologies to boost data rates and improve reliability. However, they often operate under the premise of an 'ideal' environment, which, in real-world scenarios, rarely exists. The dynamism of the real world, with ever-changing user densities, interference sources, and spectrum availabilities, means that these networks frequently operate far from their peak potential.

[011] Additionally, the rise of edge computing and the decentralized processing of data closer to its generation source further complicates the data transfer equation. While it offers many benefits, such as reduced latency and bandwidth efficiency, it also presents new challenges in ensuring seamless data transfer between devices and edge servers.

[012] User expectations have also evolved. The modern user does not merely demand connectivity; they expect high-speed, seamless, and consistent connectivity. With the proliferation of ultra-high-definition content, virtual reality, and augmented reality applications, the amount of data that needs to be shuttled across networks is staggering. This massive data transfer demand is not just a feature of dense urban environments but is becoming a norm even in suburban and rural settings.

[013] Moreover, the global emphasis on security and privacy means that data transfer is not just about speed and reliability. It's also about ensuring that data is securely encrypted, efficiently authenticated, and protected from potential eavesdroppers and malicious actors.

[014] It is in this context that the present invention emerges, recognizing the multi-faceted challenges of modern wireless communication and aiming to revolutionize the way data is transferred. The method proposed doesn't just focus on raw speed or brute force data pushing but takes a holistic approach. It considers the nuances of real-world environments, user expectations, emerging technologies, and the overarching need for secure, efficient, and reliable communication. This invention, therefore, not only addresses the immediate concerns facing wireless data transfer but also lays the groundwork

for the future, ensuring that as technology and demands evolve, our networks are well-equipped to keep pace.

[015] Title: Adaptive Data Transfer in Wireless Communication Systems

Abstract: This patent discloses a method and system for adaptively transferring data in a wireless communication system. By assessing the quality of the connection, data type, and user requirements, the system modifies the data transfer technique, optimizing for speed or quality depending on the circumstances.

Relevance: This patent is highly relevant to the proposed invention. It addresses adaptive techniques in data transfer based on environmental and user-specific parameters.

[016] Title: Method for Enhanced Packet Retransmission in Unpredictable Wireless Environments

Abstract: The invention relates to a system that monitors and anticipates potential packet loss in wireless networks due to interference or poor signal quality. When a packet loss is anticipated, the system preemptively retransmits packets to ensure data integrity.

Relevance: While the focus of this patent is on packet retransmission, its approach to mitigating data transfer issues in volatile wireless environments aligns with the broad goals of the proposed invention.

[017] Title: System and Method for Intelligent Bandwidth Allocation in Wireless Networks

Abstract: The patent introduces a method where devices in a network communicate their immediate and anticipated bandwidth requirements. The

network then intelligently allocates bandwidth, ensuring optimal utilization and reduced congestion.

Relevance: This patent's emphasis on efficient bandwidth utilization through intelligent allocation makes it pertinent to the proposed invention's objective of improved data transfer.

[018] Title: Wireless Data Transfer Using Dynamic Encryption and Compression

Abstract: This invention presents a method for wireless data transfer where data is both encrypted for security and compressed for faster transmission. The system employs dynamic algorithms that adjust based on the nature of the data and network conditions.

Relevance: The patent addresses both the speed and security aspects of wireless data transfer, making it relevant to the proposed invention's broader goals.

[019] Title: Real-time Adjustment of Wireless Transmission Protocols based on Environmental Feedback

Abstract: The system continuously collects feedback on wireless environment conditions, such as interference sources, signal quality, and device densities. Using this feedback, the system adjusts the transmission protocols in real-time, optimizing for speed, reliability, or a balance of both.

Relevance: Given its emphasis on real-time adjustments based on environmental conditions, this patent is highly pertinent to the aims of the proposed invention, which seeks to improve data transfer in diverse scenarios.

[020] In this respect, before explaining at least one object of the invention in detail, it is to be understood that the invention is not limited in its application to

the details of set of rules and to the arrangements of the various models set forth in the following description or illustrated in the drawings. The invention is capable of other objects and of being practiced and carried out in various ways, according to the need of that industry. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

[021] These together with other objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the disclosure. For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be made to the accompanying drawings and descriptive matter in which there are illustrated preferred embodiments of the invention.

SUMMARY OF THE PRESENT INVENTION

[022] The proposed invention introduces a novel method for enhancing the efficiency, speed, and reliability of data transfer within wireless networks. Recognizing the challenges of modern wireless communication, such as increased device connectivity, diverse data types, real-world environmental interferences, and evolving user expectations, the method seeks a holistic approach to wireless data transfer. Instead of focusing solely on raw speed or brute force data pushing, the method takes into account the nuances of real-world conditions, user behavior, technological advances, and security requirements. By integrating adaptive techniques, preemptive measures for potential packet loss, intelligent bandwidth allocation, dynamic encryption, and compression, along with real-time adjustments based on environmental feedback, the invention aims to redefine and refine wireless communication.

This ensures not just faster and more consistent connectivity but also anticipates and prepares wireless networks for future technological demands and user needs.

5 [023] In this respect, before explaining at least one object of the invention in detail, it is to be understood that the invention is not limited in its application to the details of set of rules and to the arrangements of the various models set forth in the following description or illustrated in the drawings. The invention is capable of other objects and of being practiced and carried out in various ways, according to the need of that industry. Also, it is to be understood that the
10 phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

[024] These together with other objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the disclosure. For a better understanding of the invention, its
15 operating advantages and the specific objects attained by its uses, reference should be made to the accompanying drawings and descriptive matter in which there are illustrated preferred embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

20 [025] When considering the following thorough explanation of the present invention, it will be easier to understand it and other objects than those mentioned above will become evident. Such description refers to the illustrations in the annex, wherein:

[026] **FIG. 1**, illustrates a general functional working diagram, in accordance with an embodiment of the present invention.

[027] FIG. 2, illustrates a concept of the functional flow diagram, accordance with an embodiment of the present invention.in accordance with an embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

5 **[028]** The following sections of this article will provide various embodiments of the current invention with references to the accompanying drawings, whereby the reference numbers utilised in the picture correspond to like elements throughout the description. However, this invention is not limited to the embodiment described here and may be embodied in several other ways.
10 Instead, the embodiment is included to ensure that this disclosure is extensive and complete and that individuals of ordinary skill in the art are properly informed of the extent of the invention.

[029] Numerical values and ranges are given for many parts of the implementations discussed in the following thorough discussion. These
15 numbers and ranges are merely to be used as examples and are not meant to restrict the claims' applicability. A variety of materials are also recognised as fitting for certain aspects of the implementations. These materials should only be used as examples and are not meant to restrict the application of the innovation.

20 **[030]** Referring now to the drawings, these are illustrated in FIG. 1&2, The proposed invention unveils a method designed to revitalize how data transfer operates within wireless networks, paving the way for an era of enhanced efficiency, speed, and reliability. As the digital landscape continues to burgeon with an ever-increasing number of connected devices, the need for a
25 transformative approach to wireless data transfer becomes apparent. This

invention seamlessly bridges the gap between the present and the future of wireless communication.

[031] At its core, the method discerns the multifaceted nature of wireless communication challenges. It begins by addressing the inherent unpredictability of wireless environments, with their ever-fluctuating user densities, interference sources, and spectrum availabilities. Rather than seeking perfection within a controlled setting, the invention thrives in the chaos of the real world, constantly adapting and evolving to optimize data transfer.

[032] The method employs adaptive techniques that intuitively understand the unique requirements of different data types. Whether it's the rapid exchange of text messages, the streaming of high-definition videos, or the synchronized dance of IoT devices, the system tailors its approach based on the nature of the data being transferred. This ensures that every byte of data, regardless of its nature, is given the optimal path for transmission.

[033] Furthermore, the invention acknowledges the unfortunate but inevitable reality of packet loss within wireless transmissions. To counteract this, it incorporates preemptive measures that anticipate potential packet losses and acts proactively. By preemptively retransmitting packets, the system ensures that data integrity remains uncompromised, even in the most challenging wireless conditions.

[034] But it's not just about data integrity; it's also about making the best use of available resources. The method embodies an intelligence that allows it to gauge the immediate and anticipated bandwidth requirements of devices within the network. Through this understanding, it can allocate bandwidth judiciously,

ensuring that no device is left wanting and that network congestion becomes a relic of the past.

[035] In today's world, where data breaches and cyber threats are ever-looming, the invention doesn't neglect the imperative of security. It introduces dynamic encryption measures, ensuring that data isn't just transferred swiftly, but also securely. The encryption algorithms are dynamic, adjusting to the nature of the data and the prevailing network conditions, making it exceedingly difficult for malicious actors to intercept or decode the data.

[036] A standout feature of the proposed invention is its capability for real-time adjustments. As the wireless environment ebbs and flows, the system continuously collects feedback. This feedback is then processed instantaneously, allowing the system to tweak its transmission protocols on-the-fly. Whether it's to optimize for speed, bolster reliability, or strike a balance between the two, the system's real-time adaptability ensures that it remains a step ahead of the ever-evolving challenges of wireless communication.

[037] In continuing to grasp the profound impact of this invention, it is essential to understand the broader implications it offers for the digital age. As wireless networks become the backbone of virtually all facets of modern life, from personal entertainment to critical infrastructure management, the stakes for robust and seamless communication are higher than ever before.

[038] The method, in its essence, ensures that connectivity is not just about being online but being online in the most optimized manner possible. It takes into consideration the dynamic nature of human behavior and the unpredictable manner in which devices are used. For instance, during a major sporting event or during breaking news, there might be sudden spikes in data demand as users

flock to streaming platforms. In these scenarios, the invention's ability to dynamically adjust bandwidth allocations and preemptively manage data packets ensures that users experience minimal buffering and delays.

[039] Moreover, with the world rapidly moving towards a more interconnected reality with the Internet of Things (IoT), the sheer volume of devices that need to communicate simultaneously is astounding. Everything from kitchen appliances to city infrastructure could be sending and receiving data. Here, the invention's capability to handle diverse data types and its intelligent bandwidth allocation become pivotal. It ensures that a smartwatch checking for weather updates doesn't interfere with a self-driving car's navigation data transmission. Another key aspect is the global emphasis on sustainability and efficiency. With data centers consuming vast amounts of energy and resources, any method that can optimize data transfer and reduce the need for excessive re-transmissions is a boon for sustainability. By ensuring data is sent efficiently the first time, the invention could potentially lead to significant energy savings in the long run.

[040] The security facet of the invention cannot be overstated. As cyber threats become increasingly sophisticated, ensuring that data is securely transmitted is as vital as the transfer speed itself. With its dynamic encryption, the invention not only ensures that data remains confidential but also guarantees its integrity. This is especially critical in applications like online banking, telemedicine, and other sectors where the accuracy and privacy of data are paramount.

In terms of scalability, the method is designed to cater to networks of all sizes, from small home setups to expansive city-wide networks. This flexibility ensures

that as cities grow and evolve, the method remains relevant, dynamically adjusting to the changing landscape without necessitating major overhauls.

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We Claim:

1. A method for wireless data transfer, comprising the step of dynamically adapting transfer techniques based on the type and nature of data being transmitted.
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2. The method of claim 1, further incorporating a system to anticipate potential packet losses in a wireless environment and initiating preemptive retransmission of said packets to maintain data integrity.
3. The method as per claim 1 or 2, wherein the adaptive techniques involve allocating bandwidth based on immediate and anticipated bandwidth requirements of devices within the network.
10
4. A method as elucidated in any preceding claim, where said method utilizes dynamic encryption algorithms that modify based on both the data's nature and the prevailing network conditions.
- 15 5. The method of any of claims 1-4, wherein said system continually harvests feedback from the wireless environment, adjusting transmission protocols in real-time to optimize for speed, reliability, or a combination thereof.
6. A method as detailed in any preceding claims, wherein said method incorporates an intelligent mechanism to recognize and cater to sudden spikes in data demands, adjusting bandwidth and transmission techniques to accommodate such spikes.
20
7. The method of any of the preceding claims, wherein said system is designed to handle diverse data transmissions ranging from simple text-based data to high-definition multimedia streams, ensuring optimal transmission for each data type.
25

8. A method as described in any of the preceding claims, optimized for energy efficiency by reducing the need for re-transmissions and ensuring data is sent efficiently on the first attempt.

5 9. A method as set forth in any of the preceding claims, scalable to accommodate wireless networks of varying sizes, from personal networks to city-wide infrastructures.

10 10. A method for wireless data transfer as portrayed in the preceding claims, wherein said method seamlessly integrates with existing wireless standards and protocols, offering enhanced performance without the need for major infrastructural changes.

Dated this 24th day of August 2023

Applicant

Andhra University

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ABSTRACT

A METHOD FOR IMPROVING DATA TRANSFER IN A WIRELESS NETWORK

5 [041] The invention presents an advanced method for wireless data transfer, optimizing speed, reliability, and security. This method utilizes adaptive techniques to cater to diverse data types, preemptive measures for potential packet loss mitigation, intelligent bandwidth allocation, dynamic encryption for enhanced security, and real-time adjustments based on environmental feedback, ensuring optimal wireless communication across a range of devices and scenarios.

Accompanied Drawing **[FIGS. 1-2]**

10

Dated this 24th day of August 2023

Applicant

Andhra University

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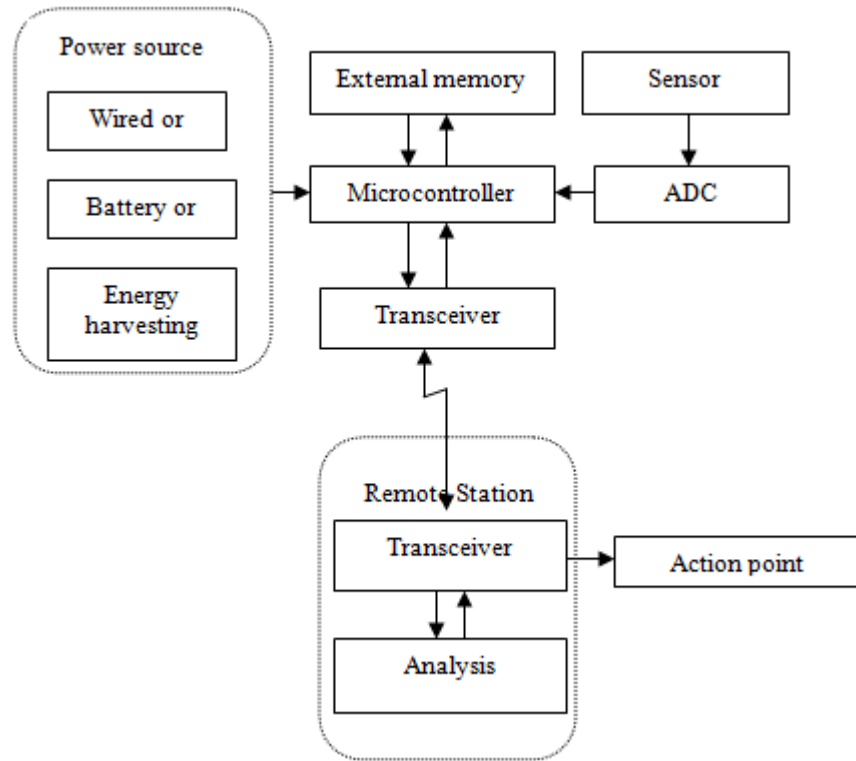


Figure 1

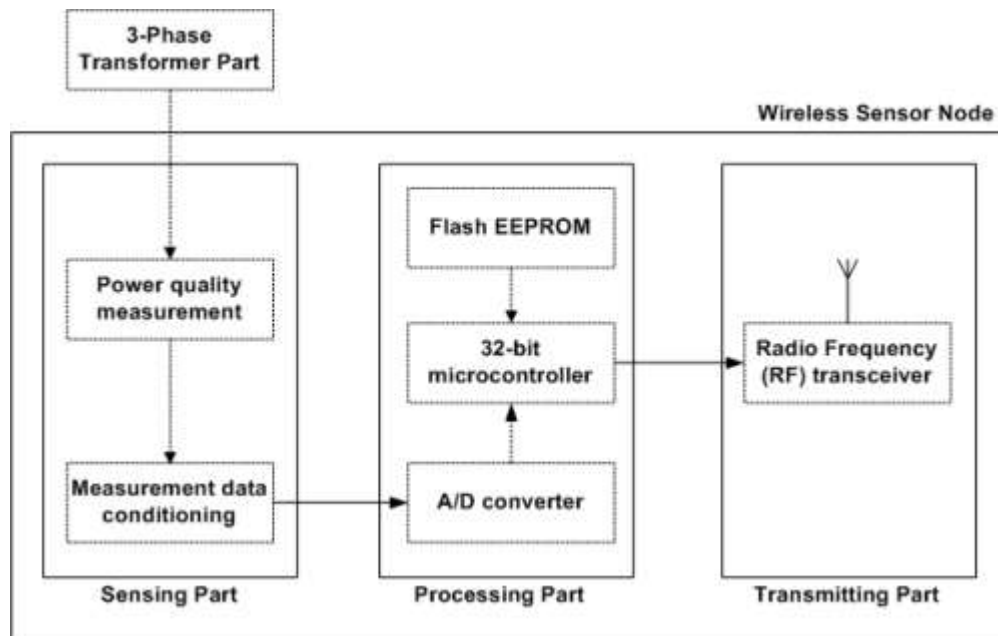


Figure 2

Dated this 24th day of August 2023